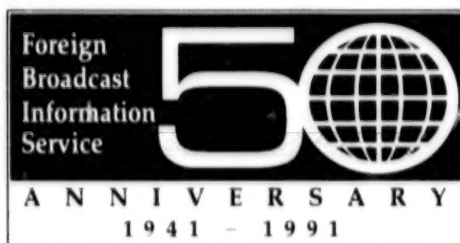


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24 OCTOBER 1991



JPRS Report

Telecommunications

Telecommunications

JPRS-TTP-91-006

CONTENTS

24 October 1991

INTERNATIONAL

- Siemens Reports Activities in New Laender, USSR *[Duesseldorf HANDELSBLATT 23-24 Aug]* .. 3

SUBSAHARAN AFRICA

ANGOLA

- Telecommunications Contract Signed With Portuguese Company *[Luanda Radio]* 3

DJIBOUTI

- Agreement With Radio France International *[LA NATION DE DJIBOUTI 9 Aug]* 3

GABON

- Africa No.1 First To Broadcast to Paris Area *[Libreville Radio]* 3

KENYA

- New Radio Transmitter in Coast Province *[Nairobi Radio]* 3

MAURITIUS

- Funds Granted for Telephone Modernization *[LE MAURICIEN 29 Aug]* 3

MOZAMBIQUE

- New Television Production Center To Operate in Maputo *[Maputo Radio]* 4

RWANDA

- Radio To Broadcast Throughout Africa, Middle East *[AFP]* 4

UGANDA

- TV Satellite Dish Links Country With Egypt *[Kampala Radio]* 5

ZAIRE

- Satellite Service Created *[Kinshasa TV]* 5

ZIMBABWE

- New Equipment To Boost ZIANA News Transmission *[THE FINANCIAL GAZETTE 26 Sep]* ... 5

CHINA

- Jiangsu Long-Distance Network's High-Capacity Trunkline Operational
[DIANXIN JISHU Aug 91] 6
- HDTV Included in MMEI's R&D Goals for TV Industry *[JINGJI RIBAO 26 Aug]* 6
- Shandong Imports Digital Transmission System From Germany's SEL
[ZHONGGUO DIANZI BAO 9 Aug] 6
- Construction Begun on Xian Domestic Satcom Earth Station *[SHAANXI RIBAO 30 Jul]* 6

Reports on Fiber-Optic Communications	7
Shanghai's First Production Line [JIEFANG RIBAO 27 Jul]	7
Shanghai Develops Packing Jelly [JIEFANG RIBAO 31 Jul]	7
Fiber-Optic Projects Described [KEJI RIBAO 27 Aug]	7
Nanjing-Wuhan Line Operational [JISUANJI SHIJIE 4 Sep]	7
Jilin Province Installs, Tests Microwave Lines [Changchun Radio]	8
Satellites Enhance Education Through Television [XINHUA]	8

EAST ASIA

REGIONAL AFFAIRS

Dispute With Malaysia Over Frequencies [Bangkok LOK THURAKIT 10 Sep]	9
--	---

HONG KONG

Satellite TV Company To Service 40 Asian Countries [AFP]	9
--	---

INDONESIA

Private Company Given Right To Relay CNN Broadcast [THE JAKARTA POST 4 Oct]	10
---	----

JAPAN

Australia Asks Firms To Join Satellite Project [KYODO]	11
KDD Wins Contract for Telecom Project in Sri Lanka [KYODO]	11
Agreement With EC on High-Speed Digital Phone Testing [KYODO]	11
KDD To Join U.S.-Europe Fiber-Optic Cable Projects [Tokyo Radio]	11
NTT Develops Highly Sensitive Polymer [KYODO]	12

SOUTH KOREA

Loral, GE Likely Successful Bidders for Satellite [HANGUK KYONGJE SINMUN 16 Oct]	12
U.S. Forces TV To Convert From VHF to UHF Channel in 1992 [YONHAP]	13
Korea Telecom To Invest 165 Billion Won in R&D Projects [THE KOREA ECONOMIC JOURNAL 14 Oct]	13
British Firm Prepared To Transfer Technology to Daewoo [THE KOREA HERALD 22 Oct]	13

LAOS

PRC Company Sets Up Phone System in Vientiane [Vientiane Radio]	14
---	----

MALAYSIA

TV Stations May Stop U.S. Programs [BERNAMA]	14
Minister, DPRK Group View Broadcasting Cooperation [Kuala Lumpur Radio]	14

NEW ZEALAND

TVNZ Sells Service to Western Samoa [AFP]	14
---	----

SINGAPORE

BBC World Service TV Launches Asian Service [THE STRAITS TIMES 15 Oct]	15
--	----

THAILAND

Direct Phone Links Established With SRV, Cambodia [BANGKOK POST 17 Oct]	15
Live TV Broadcast to Eight Asian Capitals [Bangkok Radio]	16

VIETNAM

Tra Bong District Color TV Relay Station Commissioned [Hanoi Radio]	16
Vice Premier Receives Australian Radio President [VNA]	16
Officials Attend Seminar on Sony's TV Equipment [Hanoi TV]	16
Hanoi-Mon Cai Microwave Communication Line Implemented [VNA]	17
Satellite Reception System Invented [Hanoi TV]	17

EAST EUROPE

HUNGARY

Telecommunications Network Purchases Intelsat Equipment [MTI]	18
---	----

POLAND

New Telephone Exchanges Planned for Silesia, Lodz [PAP]	18
---	----

LATIN AMERICA

REGIONAL AFFAIRS

Participation in TV Network Planned for 1992 [Mexico City TV]	19
---	----

ARGENTINA

ANSA News Agency Dedicates New Electronic System [LA PRENSA 19 Oct]	19
---	----

BOLIVIA

New Radio Station Begins Transmissions in El Alto [EL DIARIO 3 Oct]	19
---	----

BRAZIL

Agreement on Joint Satellite Project Signed With PRC [Brasilia Radio]	19
National Industry To Manufacture Optical Fiber [Brasilia Radio]	20
Further Details of Joint Satellite Project With PRC [O GLOBO 16 Oct]	20
Manchete Television Sale Suspended [O GLOBO 2 Oct]	20
Minister Signs Communications Accord in Rome [Rio de Janeiro TV]	20
International Telecommunication Service Fees Increase [Brasilia Radio]	21
Minister Signs Telecommunications Contract in Italy [Brasilia Radio]	21

CHILE

Entrepreneurs Negotiate Use of Soviet Satellites [EL MERCURIO 4 Oct]	21
--	----

MEXICO

NOTIMEX and Brazil's RADIOBRAS Sign Agreement [NOTIMEX]	21
---	----

NEAR EAST & SOUTH ASIA

INDIA

First Indigenous Satellite To Be Launched [Delhi Radio]	22
New Radio Station Inaugurated in Rajasthan [Delhi TV]	22
Papers Report on Second Remote Sensing Satellite	22
Fully Operational [THE HINDU 17 Sep]	22
Further Details Given [THE TIMES OF INDIA 4 Sep]	23
Maritime Satellite Station Planned for Pune [THE TIMES OF INDIA 19 Sep]	23
Country's 123d Radio Station Inaugurated in Rajasthan [Delhi Radio]	23

Hitches in Attracting Telecom Giants Noted [THE HINDU 10 Sep]	23
IRS-1B Remote Sensing Satellite in Orbit	24
Launching, Operational Details [THE HINDU 30 Aug]	24
Satellite Applications [THE HINDU 21 Aug]	25
Future Launching Plans [THE HINDU 30 Aug]	26

IRAN

Telephone Link Established With Soviet Nakhichevan [Tehran Radio]	27
New Satellite Television Station in Karaj [Tehran Radio]	27
Increase in Satellite Broadcasts Planned [Tehran TV]	27

IRAQ

International Phone Links Said Operating, Open to Public [Baghdad Radio]	27
--	----

ISRAEL

IBA Signs Agreement on Satellite Broadcasts to USSR [DAVAR 8 Oct]	27
---	----

SAUDI ARABIA

Official Details Maritime Communications [SPA]	27
--	----

SOVIET UNION

Radio Mayak To Compete Against New Commercial Station [Moscow Radio]	29
Gosteleradio's Yakovlev Holds Talks With RAI Leaders [IZVESTIYA 1 Oct]	29
First Cellular Telephone System Launched [Moscow TV]	29
Radio Independence Begins Broadcasting in Lvov [Moscow Radio]	29
TASS Chief on Agency's Future Plans [Moscow Radio]	30
Radio Rossii Carries First BBC Program [TASS]	30
Satellite Telephone Connection With Oslo Obtained [AFP]	30
Radio Rossii Takes Over First Program Transmitters [ROSSIYSKAYA GAZETA 12 Oct]	30
Satellite Telephone System Inaugurated [Vilnius Radio]	31
Frequencies of New Radio Station Given [Tallinn Radio]	31
Independent Telephone Link With Oslo Established [Vilnius Radio]	31
Commercial Radio UKV-Ekspress Broadcasts in Astrakhan [Moscow Radio]	31
Radio Ala Frequencies, Times Announced [Moscow Radio]	31
Firm Develops New Information Network [Riga Radio]	32
DX Feature Lists Transmitters 'In and Around' Lithuania [Vilnius Radio]	32
Russian Radio Official Discusses Program Allocations [Moscow Radio]	33
Work on Drafting Radio, Television Law Ceases [Moscow Radio]	34
Second Channel Used To Beam Russian TV to Uzbekistan [IZVESTIYA 15 Oct]	34
More on Radio Rossii Linkup With BBC [PRAVDA 14 Oct]	34
Telephone Link With Norway Begins Operations [BALTFAX]	34
Lithuania Wants To Join European Satellite TV System [BALTFAX]	34

WEST EUROPE

REGIONAL AFFAIRS

Proposed Compromise for EC HDTV Standard Criticized [Duesseldorf HANDELSBLATT 30-31 Aug]	35
RACE Director on Communications Program [Brussels XIII MAGAZINE Jul 91]	35
European HDTV Standard Still Debated [Bonn DIE WELT 29 Aug]	37
Availability of HDTV to Consumers Questioned [Duesseldorf VDI NACHRICHTEN 30 Aug]	38

CYPRUS

Relay Transmitters for Greek TV Begin Operations	[Nicosia Radio]	39
House Ratifies European Convention on Television	[CYPRUS MAIL 10 Oct]	39
Minister Signs Convention on Transfrontier Television	[Nicosia Radio]	39

FRANCE

Cable TV Development Seen Disappointing	[L'USINE NOUVELLE 12 Sep]	39
Sony Approves D2 Mac HDTV Standard	[LE FIGARO 27 Sep]	41
Mobile Telephone Network Test in Strasbourg	[LE FIGARO 2 Oct]	42
Disinformation Institute Director Interviewed	[LE QUOTIDIEN DE PARIS 12 Sep]	42
Company To Build Underwater Optical Fiber Cable	[Paris Radio]	44

GERMANY

ZDF Television To Manage DS-Kultur Radio Temporarily	[ADN]	44
SEL Reports Status of Projects in Eastern Laender	[HANDELSBLATT 14 Aug]	44

NETHERLANDS

ISDN Introduction Plans Outlined	[Bath ISDN NEWSLETTER 17 Jul]	45
----------------------------------	-------------------------------	----

NORWAY

Success of EB Nera Satellite Communications Seen	[AFTENPOSTEN 11 Sep]	45
--	----------------------	----

PORTUGAL

New Mobile Telephone Contract Detailed	[PUBLICO 17 Aug]	46
--	------------------	----

SPAIN

TVE Programs Broadcast to Romania	[Madrid TV]	46
Agreement Signed With Italian Media	[Madrid Radio]	47

TURKEY

New TV Transmitters, Relay Stations Inaugurated	[Ankara Radio]	47
More TV Relay Stations	[Ankara Radio]	47

UNITED KINGDOM

BBC To Supply Programs for Radio Rossii	[London Radio]	47
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Siemens Reports Activities in New Laender, USSR

91MI0477X Duesseldorf *HANDELSBLATT* in German
23-24 Aug 91 p 11

[Text] Siemens AG of Berlin and Munich, the largest private investor in Germany's new laender, dominates the electronics market in Mecklenburg-Vorpommern. Thanks to the new political atmosphere of detente, Siemens managers can also hope for an expansion of business into the Soviet Union.

Karlheinz Kaske, the chairman of the board, set out last week on his first visit to the new laender. The purpose of his visit is stated to be that of gaining an overview of the range of the company's activities; he also plans to discuss with the management of the 16 sectors any problems which may be arising, in order to push ahead with expansion in the eastern German electronics market.

"We wish to achieve the same market position in the five new laender as in West German as quickly as possible" Kaske told the *HANDELSBLATT*. "However, it is difficult at present to anticipate how the electronics market in eastern Germany will develop, in view of events in the Soviet Union."

The head of Siemens said he was pleased with the present state of business in eastern Germany. The company was already showing good rates of increase in revenues in telecommunications and transport technology; energy production and distribution, which represented a significant part of the eastern German infrastructure, were also expected to show substantial growth in the near future. Kaske stated that, "our short term aim is to achieve a turnover in the new laender of around 5 billion German marks [DM]."

Siemens' eastern German sectors were pinning their hopes on new orders from the Soviet Union. "During the coming year we expect to increase our production volume by 30 percent through new business with the Soviet Union," stated Hartmut Pratschke, managing director of Siemens Communications Systems GmbH, Greifswald.

Projected revenues of the company, which produces systems for digital communication, was expected to rise next year to DM200 (180) million. Pratschke remarked that, "for the medium term we are assuming a very high level of demand for communications systems for developing the Soviet telephone network."

Pratschke did not anticipate any problems in gaining orders from the Soviet Union during the current year. "The contracts with the Soviets are all covered by Hermes guarantees. We will encounter problems only if we encounter unforeseen political restrictions."

The eastern German managers have devoted a great deal of time in recent months to rebuilding trade with the COMECON [Council for Mutual Economic Assistance]

countries." The administrative effects of the rapid political changes in the Soviet Union should not be underestimated. It is difficult to find suitable negotiating partners, as they are often out of touch with business practice," stated the manager.

No reduction in the 1,000-person workforce is planned, as the company is a contractor to the Deutsche Bundes Post (DBP). By the end of this year 4,000 communications systems are to be supplied to the new federal states.

High-Tension Cable Sales To Be Doubled

Nor does Siemens Plant Engineering and Energy Distribution Rostock GmbH have any cause to worry about the economic situation in the Soviet Union. "At present the company does not have any significant existing or new contracts with the Soviet Union," reports Wolfgang Salzmann, the future chairman of the supervisory board of both eastern German companies. "Existing contracts with eastern German firms amount to only DM100 million and we expect to have completed these by 1994."

Similarly, sales of high-tension cables will not present any problems for Siemens Cables Schwerin GmbH of Schwerin. Even before the opening of the wall, the company had been unscathed by the Soviet Union's financing problems, since its main export markets were Scandinavia and southern Europe. "The installation cables we are now producing are mainly for the older laender. The remainder will continue to be sold in the company's traditional export markets," states Dietrich Stollmacker, the managing director.

The Schwerin company expects substantial orders for the high-tension cables produced in five of the seven sheds of the 600,000 square meter plant. "We plan to double our revenues to DM300 million by 1994 with these cables," the managing director states.

The company expects additional revenues from sales of communication cables, for which investment of DM25 million has just financed one of the most modern production plants. According to Wolfgang Buchholz, a member of the sector board for Public Communication Networks in Munich, Siemens already has an order from DBP Telekom for the supply of 600,000 dual wire kilometers of communication cables for the new laender.

According to Buchholz, "the federal post office has contracted us to provide local telephone networks in a total of 55 eastern German towns and cities, rather less than half of which are located in Mecklenburg-Vorpommern." Around half of the lines had been connected by the beginning of July.

The fact that the communication cable could not be supplied purely from the older federal states is primarily due to lack of capacity. "The decision to build a production center for communication cables in the new states was inevitable right from the start," Buchholz adds. "The need to develop the telephone network in the new

states required additional production capacity which we do not have at our factory at Neustadt bei Coburg."

The work will also make jobs safe at the Schwerin factory. "The production center will enable us to take on an additional 60 workers at our site," adds Stollmacker, who puts the workforce at around 1,550, not including 350 part-time workers.

Construction Contracts Going Partially to Eastern German Companies

The electronics company is also indirectly ensuring employment in eastern Germany. For example, Siemens has passed the bulk of its construction contracts for the new production at Schwerin to eastern German companies. "Some DM10 million of the investment went to companies in the new laender. Installation of the machinery was also carried out by eastern German craftsmen," Stollmacker points out. This is confirmed by Wolfgang Salzmann, director of Siemens' Energy Supply and Distribution management sector, who comments

that "it is our stated aim to involve as many eastern German workers as possible in the company's expansion in the new laender."

The fact that, eighteen months after the changes, Siemens already has a completely new production plant for communication cables at Schwerin is largely due to the electronics company's good contacts with the former DDR. Stollmacker points out that "even before the opening of the wall, the Schwerin cable factory, which was part of the former VEB [people's own business] combine of Overspree, Berlin, was producing wiring for Siemens as part of a customer order."

Thus, the eastern German company was a prime candidate for takeover. First however it had to leave the Berlin cable combine, which consisted of 13 cable factories; only then could the factory be sold as quickly as possible to Siemens. "This was one of the most important steps towards safeguarding the company's future," states Stollmacker.

ANGOLA

Telecommunications Contract Signed With Portuguese Company

MB2010083891 Luanda Radio Nacional Network in Portuguese 1900 GMT 19 Oct 91

[Text] The Portuguese Company Radio Marconi, CPRM, will carry out two projects for the modernization of the Angolan telecommunications network.

The first project covers the telecommunications network and the reestablishment of communications between Luanda and the Angolan provincial capitals.

The second project is designed to complete the radio telecommunications network and the signals network in the Angolan provincial capitals.

The contract, signed between Marconi and the Angolan Government, includes the financing, supplying, and installation of telecommunications equipment, including six earth satellite stations, 15 earth television stations, as well as technical assistance for the maintenance of equipment guaranteed by a Portuguese-Angolan technical team.

DJIBOUTI

Agreement With Radio France International

92WT0004A Djibouti LA NATION DE DJIBOUTI in French 9 Aug 91 p 3

[Text] An agreement enabling Radio France International (RFI) to install a retransmission station in Djibouti was signed Sunday in Djibouti by the secretary-general of Information, Mr. Ismail Hussayn Tani, and RFI's CEO Mr. Andre Larquie.

Installation of the station will make it possible to extend the broadcast of RFI's programs to the Indian Ocean islands, central and southern Africa, and the Middle East. The station will consist of three 50-KW short-wave transmitters and their antennas.

The agreement is part of the ongoing cooperation between Djibouti and France and, the text emphasizes, takes into account the desire of the Djibouti Government to encourage any joint action that promotes the use of the French language.

The new installation, which will be constructed over a period of three years, will also enable the radio to reach the southern part of Europe and the Soviet Union, Iran, Afghanistan, the Indian subcontinent, and North Africa. RFI intends, in particular, to expand its programs in Arabic and Persian.

The president of the Djibouti Republic, Mr. Hassan Gouled Aptidon, met with Mr. Andre Larquie when the agreement was signed.

GABON

Africa No.1 First To Broadcast to Paris Area

AB2110192091 Libreville Africa No.1 in French 1830 GMT 19 Oct 91

[Text] Africa No.1, our radio station, has been authorized by the French High Council on Audiovisual to broadcast to the Paris area as of 1 November from the Eiffel Tower on 107.6 megahertz. This operation, which puts an end to the north-south monologue, also marks the recognition of the ability and talent of African communications workers.

In this perspective, Africa No.1 has offered to broadcast the most representative programs from African national radios in its daily broadcasts.

KENYA

New Radio Transmitter in Coast Province

EA1410180791 Nairobi Kenya Broadcasting Corporation Network in English 1300 GMT 14 Oct 91

[Text] The district officer in Taita-Taveta District [Coast Province], Mr. Arap Sigei, has thanked the Kenya Broadcasting Corporation for undertaking the opening of a radio transmitter in the area. Mr. Sigei gave the commendation when the KBC Coast Region chief technician officer, Mr. Amos Hugo, called on him at his office yesterday. He stressed the important role radio played in rallying people to development, education, and entertainment, especially residence or rural areas where other forms of media were inaccessible. Mr. Hugo said KBC was committed towards enhancing good radio and television countrywide.

MAURITIUS

Funds Granted for Telephone Modernization

92WT0005A Port Louis LE MAURICIEN in French 29 Aug 91 pp 1, 4

[Article by Raj Gowrea—first paragraph is LE MAURICIEN introduction]

[Text] The Commonwealth Development Corporation (CDC) has granted a 15-million-rupee [Rs] line of credit to the Mauritian company London Telephone Systems [LTS]. The capital will be funneled into projects to expand the telecommunications activities of LTS. The London Telephone Systems markets its electronic telephone systems on a rental basis.

An agreement protocol to that effect was signed this morning by the CDC representative to Mauritius, Mr. Mark Edwards, and the administrative director of the London Telephone Systems, Mr. John King, while the president of the company, Mr. Maxime King, and the

commercial attache of the British High Commission, Mr. Jeremy Larnier, looked on.

This new financial infusion will allow the London Telephone Systems to undertake projects to expand and modernize telephone equipment. It should be pointed out that LTS markets its electronic telephone systems on a rental basis, sparing those who opt to rent any investment or upkeep and repair costs.

The director of the London Telephone Systems, Mr. John King, stated during the signing of the protocol that the new Rs15-million line of credit will be added to the Rs18 million that has already been invested in the entire project, which has a price tag of Rs55 million. He added that the LTS, which has been in existence for three years, has offered its expertise to over 350 Mauritian companies, which are now equipped with its modern telephone systems (PABX). The present move to make further investments is guided by a concern to keep equipment compatible with the new technologies, especially given the state of the economy as the country enters its second phase of industrialization, said Mr. John King.

The CDC representative, Mr. Mark Edwards, declared that the British organization's involvement will henceforth aim at more active participation in private-sector projects requiring moderate investments. Accordingly, it was announced that the CDC is already involved in discussions with the London Telephone Systems to acquire a capital stake in the company.

Until 1987, the CDC's financial intervention was limited to government projects involving the financial, textile, and tourist industries. Investments to date have totaled 29 million sterling pounds. That figure will climb to 50 million between now and 1994, with the money going to the housing and cane-trash energy sectors.

MOZAMBIQUE

New Television Production Center To Operate in Maputo

MB0610132091 Maputo Radio Mozambique Network in Portuguese 1030 GMT 6 Oct 91

[Text] A new television production center worth \$8 million is expected to begin operating in Maputo City's Machava Ward within the next two years. The project will be implemented under the terms of a Mozambican-Portuguese accord.

The center will include studios for production, gathering information, and transmission. The premises will occupy a total area of 2,500 square meters.

Beira and Nampula cities are expected to have television transmissions as of December 1991 and June 1992, respectively.

RWANDA

Radio To Broadcast Throughout Africa, Middle East

AB1510135591 Paris AFP in French 0629 GMT 14 Oct 91

[Text] Kigali, 14 Oct (AFP)—Radio Rwanda will soon use a 100-kilowatt shortwave transmitter which will enable it to broadcast throughout Africa and the Middle East, Ferdinand Nahimana, the director of the Rwandan Information Office said today. This state-owned station, which was, up to now, using a 50-kilowatt transmitter, will also launch a second station for French, English, and Swahili-speaking listeners, Mr. Nahimana added.

UGANDA

TV Satellite Dish Links Country With Egypt

EA1210095291 Kampala Radio Uganda Network in English 1400 GMT 11 Oct 91

[Excerpt] A television satellite dish to link Egypt and Uganda has been installed at the Ministry of Information headquarters at Nakasero [in Kampala]. The satellite dish is a generous donation from the Egyptian Government to the Ugandan Government. Installed by the Egyptian and Uganda television engineers, the dish will enable Ugandan television to telecast various programs from Egyptian television. The satellite dish was handed over today to the minister of information, Mr. Paul Etiang, by the Egyptian charge d'affaires to Uganda, Mr. Abd al-Hamid Ali.

Speaking at the occasion, Mr. Etiang expressed appreciation to the envoy for facilitating the installation of the satellite dish to link Uganda and Egypt and the Arab world. He said the link would help in cementing relations between Uganda and Egypt and the region, and would enhance social, cultural, economic, and political benefits for the people concerned. The minister expressed the hope that the future international events would be telecast directly to Ugandan viewers. He told the Egyptian charge d'affaires that Ugandan viewers would be interested in Egyptian historical programs, especially on the pyramids and what the River Nile means to them. Mr. Etiang also expressed the need for Egyptian Islamic programs which could be of benefit to the Ugandan Muslims.

The minister revealed that the negotiations were in advanced stages with the American Cable News Network, CNN, to have Ugandans view their programs. [passage omitted]

ZAIRE

Satellite Service Created

LD1210095291 Kinshasa Zaire OZRT Television
Network in French 1859 GMT 11 Oct 91

[Excerpt] A decree allowing the creation and organization of a public service called the Zaire network of telecommunications by satellite, in brief, REZATEL-SAT, was signed on 30 September 1991 by the president of the Republic. [passage omitted]

ZIMBABWE

New Equipment To Boost ZIANA News Transmission

MB0910173091 Harare THE FINANCIAL GAZETTE
in English 26 Sep 91 p 2

[Unattributed report: "New Equipment To Boost
ZIANA News Network"]

[Text] REUTERS Ltd, an international news and financial information company, has donated communications equipment and engineering time worth over \$33,000 in a project to upgrade the distribution of ZIANA's [Zimbabwe Inter-African News Agency] news network.

The upgrade in conjunction with two British engineers contracted by ZIANA, which was successfully commissioned this week and well in time for CHOGM [Commonwealth Heads of Government Meeting], will speed up ZIANA's domestic and international news transmission to the local media by over 15 times and therefore reduce delays and backlogs of news by two to three hours.

"REUTERS is pleased to have assisted in this project which will bring rapidly changing domestic and international news much faster to the media and general public in Zimbabwe," said REUTERS business manager of Southern Africa, Mr David Bloom.

"Textual news delivered to ZBC [Zimbabwe Broadcasting Corporation], ZTV [Zimbabwe Television] and the printed press will also be in computerised formats for easier selection and processing," he said.

Jiangsu Long-Distance Network's High-Capacity Trunkline Operational

92P60009E Beijing DIANXIN JISHU
[TELECOMMUNICATIONS TECHNOLOGY]
in Chinese No 8, Aug 91 p 48

[Untitled news brief by Jin Yuqi [6855 6877 3825]]

[Summary] The Jiangsu Province long-distance telephone network's first high-capacity digital microwave (DMW) trunkline was put into operation on 8 May 1991. This trunkline, running from Nanjing through Yangzhou, Yancheng, Nantong, Wuxi, and Zhenjiang cities as well as Taizhou, Zhangjiagang, Dongtai, and other counties and towns, is 481 kilometers in overall length. Funded with a loan from Britain's Cable & Wireless PLC, this independently designed and constructed trunkline includes a DM-1000 140 Mbit/s [DS4 standard] DMW system imported from Japan's Fujitsu Ltd.

HDTV Included in MMEI's R&D Goals for TV Industry

92P60009D Beijing JINGJI RIBAO [ECONOMIC DAILY] in Chinese 26 Aug 91 p 3

[Article by Xie Shixin [6200 0013 2450]: "Nation's Color TV Industry Development Outline Becomes Clear: HDTV Development Strategy To Be Formulated Next Year"]

[Summary] The developmental outline for the nation's color TV industry in the last decade of the 20th century is now becoming clear. MMEI recently disclosed its four-point strategy:

(1) While maintaining the current domestic market share for mid-to-low-grade color TVs, efforts to accelerate development of new technologies should be increased. Annual production of color TVs in the remaining years of the Eighth 5-Year Plan will be 12-15 million; high-grade color TVs will be put into production, with a goal of 4 million sets to be exported. CAD technology will be applied to design of electronic tuners, including digital TV electronic tuners; and digital-IC-based TVs and frequency-synthesized remote control units will be developed.

(2) Product quality, especially quality of the "Zhonghua" [China] brand color TVs, will be further raised.

(3) Product design and development potential will be increased, principally with CAD/CAM technologies.

(4) The great significance of high-definition television (HDTV) technology should be fully recognized, and this technology should be developed and applied. Based on the nation's needs and the current domestic economic situation, the major strategic significance of the development of HDTV technology will be considered. Following upon the trends seen abroad, Chinese authorities are now organizing discussion groups and formulating development strategies; it is estimated that a relatively

clear-cut strategy—including a unified domestic HDTV [technical] standard—will be formulated by early next year.

Shandong Imports Digital Transmission System From Germany's SEL

92P60009C Beijing ZHONGGUO DIANZI BAO
[CHINA ELECTRONICS NEWS] in Chinese 9 Aug 91 p 3

[Article by Yu Yu [3768 1342]: "Shandong's First Digital Transmission System"]

[Summary] Shandong Province's first digital transmission system, incorporating technology and equipment imported from Germany's SEL and funded with the aid of a German loan, became formally operational a few days ago. Consisting of a 22-station Jinan-to-Qingdao segment and a 10-station Yantai segment, as well as 32 other stations, the 140 Mbit/s [DS4 standard] wireless repeater system provides each segment with one operating channel and one guard channel; each channel can carry 1,920 simultaneous telephone circuits, or can carry TV broadcasts.

Construction Begun on Xian Domestic Satcom Earth Station

92P60009A Xian SHAANXI RIBAO in Chinese 30 Jul 91 p 1

[Article by Zhou Zhenqing [0719 2182 3237]: "Xian Domestic Satellite Communications Earth Station Construction Begun"]

[Summary] Ground breaking for the Xian domestic satcom earth station, located in Chang'an County, took place on 23 July. Outfitted with equipment imported from the United States and Canada by MPT with the aid of a foreign loan, the station will eventually have two 13-meter antennas and one 9-meter antenna. First-phase construction calls for one 13-meter antenna, which can be linked with the Intelsat Indian Ocean transponders to provide Shaanxi Province and the Xian area with 720 long-distance circuits in the near term and 960 in the long term.

Total investment for this project is estimated to be 24.18 million yuan; overall construction covers an area of 2,060 square meters. Cooperating on the design and construction of the project are the Shaanxi Province Radio Communications Office, the MPT Design Institute, the Xian Municipal Second Construction Engineering Co., and the Xian Co. of MPT's China Communications Construction Corporation. It is estimated that civil construction will be completed by the end of November this year, equipment will be installed early in 1992, and the station will be formally turned over for operation by the end of 1992.

Reports on Fiber-Optic Communications

Shanghai's First Production Line

92P60010A Shanghai JIEFANG RIBAO in Chinese
27 Jul 91 p 1

[Article by Zhang Zhiyuan [1728 1807 6678]: "First Integrated Fiber-Optic-Cable Production Line Completed"]

[Summary] Construction on Shanghai municipality's first state-of-the-art fiber-optic-cable production line, installed at the Shanghai Cable Plant (SCP), has been completed. This information was disclosed to this writer yesterday by an SCP senior engineer, who noted that there are hopes to provide fiber-to-the-home services to Shanghai municipality residents within 10 years. This integrated production line, one of 14 key projects of the Shanghai Municipal Government, includes both imported and independently designed and manufactured equipment. It will produce a variety of fiber-optic-cable types, including mountain cable, cold-resistant cable, marine and river cable, multi-core (i.e., multi-fiber) cable, and military cable.

Overall investment for the new production line was 22.57 million yuan, annual designed output is 2,000 kilometers of cable, and annual industrial added value after three years of operation is estimated at 43.30 million yuan, amounting to 12 million yuan in taxes to the state.

Shanghai Develops Packing Jelly

92P60010B Shanghai JIEFANG RIBAO in Chinese
31 Jul 91 p 1

[Unattributed article: "Shanghai Develops Optical-Fiber Packing Jelly"]

[Summary] East China Institute of Chemical Engineering's Materials Science Research Division and Shanghai's Ziyou [5261 0645] Institute of Chemical Engineering, Science and Technology have jointly developed one of the key elements in the manufacture of fiber-optic cable—optical-fiber packing jelly. Moreover, they have received orders for the product from Germany's Siemens, the United State's Corning, and Britain's Imperial Chemical Industries Co. After trials at the Tai Hu Communications Equipment Plant in Wuxi, the new material, which passed State Education Commission-sponsored ministry-level acceptance check yesterday, will be incorporated into the Shanghai Cable Plant's newly completed imported fiber-optic cable production line. This new line will provide much of the 800,000-odd kilometers of fiber needed for domestic fiber-optic cable projects in the Eighth 5-Year Plan.

Fiber-Optic Projects Described

92P60010C Beijing KEJI RIBAO [SCIENCE AND TECHNOLOGY DAILY] in Chinese 27 Aug 91 p 1

[Article by Wang Hanlin [3769 5060 2651]: "Communications Technology Strides Into New Phase: Overall Has Reached Mid-Eighties International Level"]

[Summary] The nation's communications trunkline construction enterprises will completely convert to fiber-optic cable in the Eighth 5-Year Plan. This major change is a result of one of the priority projects in the Seventh 5-Year Plan, an MPT-sponsored project entitled "Communications Technology Development," which has now brought China's communications industry as a whole into a new era, equivalent to mid-eighties international levels.

Major achievements during the Seventh 5-Year Plan include commercialization of 34 Mb/s [DS3 standard] single-mode-fiber communication systems, installation of functional 140 Mb/s [DS4 standard] fiber systems, and development of key pieces of equipment for DS5 [565 or 622 Mb/s] fiber systems; conversion from multimode to single-mode fiber; domestic manufacture of complete municipal-telephone and long-distance-telephone stored-program-controlled (SPC) digital switchboards; development of complete 140 Mb/s digital microwave (DMW) systems, and construction of experimental 6 GHz 140 Mb/s DMW systems; completion of narrow-band integrated services digital network (ISDN) experimental network models; and realization of experimental coherent fiber-optic communications systems at research laboratories. In addition, industrial-scale pilot plants for manufacture of single-mode fiber are in operation, techniques for domestic manufacture of the quartz-glass tube used in optical fibers have been mastered, and a variety of optical devices and instruments used in fiber-optic communications have been domestically developed. Statistics released by MPT show that as of the end of 1990, 3,800 kilometers of fiber-optic lines incorporating domestically made equipment had been laid nationwide.

Nanjing-Wuhan Line Operational

92P60010D Beijing JISUANJI SHIJIE [CHINA COMPUTERWORLD] in Chinese No 34, 4 Sep 91 p 2

[Article by Xin You [2450 1429]: "Nation's Backbone Communications Network—Nanjing-Wuhan Fiber-Optic Cable Line Formally Operational"]

[Summary] The nation's first high-capacity, long-range fiber-optic cable communications trunkline, the 979-kilometer-long Nanjing-to-Wuhan line, has passed state acceptance check and is formally operational. This DS4 (140 Mb/s) single-mode long-wavelength fiber-optic transmission system incorporates equipment and cable imported from Germany, the United States, Japan, and Italy. This 107-million-yuan line now provides over 2,340 terminal circuits and 4,500 repeater circuits. It will

be linked with the existing Beijing-Shanghai-Hangzhou and Nanjing-Wuhan-Guangzhou coaxial cable communications systems as well as with the just-recently-completed Beijing-Shanghai DMW system to form a nationwide backbone communications network that will greatly increase long-distance communications capability.

Jilin Province Installs, Tests Microwave Lines

*SK0710015191 Changchun Jilin People's Radio
Network in Mandarin 1030 GMT 4 Oct 91*

[Summary] Installation and tests of two digital microwave trunk lines from Changchun to Hunchun and from Changchun to Hunjiang, key post and telecommunications projects of our province, were completed on 16 September. The section from Changchun to Jilin and Yanji was already put into operation. Total investment in installing these two imported microwave lines was 56 million yuan. Every wave channel is capable of providing 1,920 long-distance telephone circuits. Total length of the microwave lines is 1,080 km, and 40 microwave stations were built in 19 cities and counties in the east and southeast parts of our province.

Satellites Enhance Education Through Television

*OW1110114491 Beijing XINHUA in English
0908 GMT 10 Oct 91*

[Excerpt] Beijing, October 10 (XINHUA)—Today's YOUTH NEWS reported that China now has two television channels designated exclusively for educational programming. In addition, more than 500 TV relay stations for educational programs have been built or are under construction.

The newspaper added that the country now has over 3,000 receiving stations, and more than 30,000 program viewing centers which attract an audience of over 20 million people.

China plans to offer two additional channels before 1995, according to the paper. One channel will be devoted to nine-year compulsory education programs, while the other will carry programs designed for ethnic minorities.

The two new channels will increase the daily air time of educational programs from the present 30 hours to 70 hours. [passage omitted]

REGIONAL AFFAIRS

Dispute With Malaysia Over Frequencies

92WT0003A Bangkok LOK THURAKIT (supplement)
in Thai 10 Sep 91 p 14

[Text] Mr. Rungrot Siprasoetsuk, a deputy undersecretary of communications, said of the talks held on the 5th and 6th of September between Thailand and Malaysia over the problem of VHF television frequencies that the two sides had not been able to agree. Malaysia had not been ready to agree inasmuch as some details had not been resolved. The talks would have to be continued in Penang in November.

That which they did agree on was that the interference with the VHF television frequencies broadcast in the border area of the South was the result of some Thai and Malaysian channels being the same. Channel 8 in Malaysia was the same as channel 8 in Thailand at Hat Yai. Channels 9 and 5 in Malaysia were also the same as Thai channels.

The signal for channel 8 in Thailand was completely filled so it could not be changed. And so Malaysia had to change because it still had broadcast channels which could be changed. It was to change to channel 11, and Thailand was to provide 4 million baht to help Malaysia make this change.

As for Channels 5 and 9 the interference was not great and could be corrected with antenna towers. The Thai side had asked that each side make these corrections but Malaysia still had not said whether it would agree.

These problems have existed for many years. Malaysian officials have wanted to correct the interference with channel 8 in particular and have reported that Thailand has violated international telecommunications treaties even though the conventions followed by Malaysia made no mention of this [sort of violation], and the broadcast practices were not covered by the international laws or conventions controlling the use of broadcast channels. Only the recommendations of the International Telecommunication Union (ITU) mentioned that in border areas parties should try to coordinate the scheduling of channels. This was considered to be a domestic matter. In the past Malaysia has not coordinated this with Thailand and has not reported its use of channels to Thailand while Thailand has reported its channel use every time. This was the source of the problem.

Malaysia considered that this should be judged according to the principle that "the later party must be responsible," and since Malaysia set up its channels first, Thailand must be responsible. Thailand did not agree with this inasmuch as Malaysia did not report its channel use to Thailand at all. Thailand was providing assistance funds as a neighbor trying to correct a problem and not because it accepted the principles presented by Malaysia.

HONG KONG

Satellite TV Company To Service 40 Asian Countries

HK0610041491 Hong Kong AFP in English 0245 GMT
6 Oct 91

[Text] Hong Kong, Oct 6 (AFP)—As the satellite TV boom that swept Europe in the late 1980s prepares to engulf Asia, one Hong Kong-based company has already jumped the gun in the race to exploit the region's vast, untapped potential.

STAR TV, a member of the HutchVision Group—itsself a fully owned subsidiary of local conglomerate Hutchison Whampoa Ltd.—began transmitting in May and plans, by the first quarter of 1992, to offer a five-channel, 24-hour service to 40 countries in Asia.

"We are in uncharted territory," admitted STAR's executive vice president Arnold Tucker.

The pioneering spirit, however, looks like paying off, and the company expects to break even after the third year of full operations, despite annual running costs of some 80 million U.S. dollars.

"What we've got here is a very sexy proposition ... satellite TV in Asia," Tucker explained.

Almost 100 percent of STAR's revenues come from advertising—a fact reflected in the company's choice of which Asian countries to target, using criteria such as the level of expendable income, English-language proficiency, economic growth and the level of education.

"It's difficult now for anyone to define what is the Asian market. We have defined it in terms of the English-speaking, top five percent," said Tucker.

Among the 10 targeted countries are the Philippines, Thailand, South Korea, Indonesia and Singapore.

While the governments of some Asian countries have restrictions on satellite dish ownership, the impact of satellite TV and the rapid advances being made in dish technology look set to open a few closed doors.

"As the technology of communications gets more and more sophisticated ... you cannot continue along one path when everyone else is going along another path," Tucker said.

"It's a function of not whether you will or you won't, but how you are going to deal with the new technology. That's not an 'if,' that's a fact."

He stressed, however, that STAR had no intention of trying "to shoot our way into anything."

"It's not in the advertisers' best interest. It's not in our best interest. We want to have as placid and level a playing field as possible."

Contrary to local press reports, STAR's Chief Financial Officer Frances Wong said STAR had received no expressions of concern over its operations from any of the 40 countries that could choose to take down its signal.

"On the contrary, many governments have come to us, the owners of the television stations of those countries, to take down the signals," Wong said.

STAR currently has three channels on air—MTV, sports and a preview/entertainment channel. Under a "programme venture" with BBC World Service Television, a 24-hour news service will be fully launched in mid-November and a full entertainment channel in 1992.

Programmes on all four channels are to be broadcast in English, but a fifth Mandarin channel is to be launched soon.

"The Chinese, be they living in Malaysia, Singapore, Taiwan, Hong Kong or wherever, have more disposable income than some other groups, so they form a large number of our target audience," Wong said.

By the end of the first year of full operations, STAR aims to reach two million households and to double that figure by the end of the second year.

While advertising interests mean that STAR will naturally gravitate towards those countries viewed as more economically viable, another criterion is that of existing infrastructure.

"That's a key point," said Tucker. "The infrastructure of a country also dictates to an extent the number of potential viewers ... India is a good example, where there are lots of cable systems that we could tap into."

India and Taiwan, which also has an existing infrastructure, are currently the two countries with most STAR viewers.

"Some markets are going to take more time. Even though we know they're important from an advertiser's interest, we're not going to have two million homes there next week. It's physically impossible because they are TVRO markets—one home one dish—it takes time to get people to install those dishes."

As for comparing what is currently happening in Asia with the development of satellite TV in Europe, Wong believes "it is very, very different."

Asians have comparatively little choice in terms of television viewing, with an average of 2.5 channels per household, and there is nothing approaching the competition for viewers that exists in Europe.

According to Wong, however, that is bound to change.

"The competition will come. It's just a matter of when."

INDONESIA

Private Company Given Right To Relay CNN Broadcast

BK1110023791 Jakarta THE JAKARTA POST
in English 4 Oct 91 p 1

[Text] JAKARTA (JP)—An Indonesian private-sector company, PT Matahari Lintas Cakrawala (Malinca), a subsidiary of PT Bimantara Citra (BC), expects to be collecting subscription fees from parties monitoring the American television company CNN's broadcasts in Indonesia soon.

"PT Malinca has been given the right by CNN to relay its broadcasting in Indonesia," according to an executive of PT BC which is owned by Bambang Trihatmojo Suharto.

Peter F. Gontha, president of PT BC—the owner of the first Indonesian private broadcasting company Rajawali Citra Television Indonesia (RCTI), said here that the agreement on the cooperation would be signed next week by executives of both companies.

The agreement will allow PT Malinca to determine tariff fees for parties monitoring broadcasts of the Atlanta-based Cable News Network with parabolic antennas, which relay spillovers from Indonesia's satellite.

At the preliminary stage, PT Malinca will collect the subscription fees from star-rated hotels before charging anyone among the public who owns parabolic antennas at home or at the office.

"After working on the hotels, we also may collect fees from owners of parabolic antennas. However, for the time being, we still find it difficult to set adequate tariffs for people monitoring CNN's broadcasts at home."

According to Peter, the subscription fees for each room at a hotel using the foreign broadcasts will be Rp500 (U.S.\$0.25) per day. Based on the official data which shows that Indonesia currently has 30,000 rooms in star-rated hotels, PT Malinca could collect Rp5.47 billion annually just from the hotels.

"Actually, the fees will not generate much benefit for Bimantara as we also have to pay royalty fees to CNN," Peter said.

Peter was quoted by BISNIS INDONESIA daily yesterday as saying that the copyright agreement would expand the technical cooperation between CNN and RCTI.

"Besides that," he said, "Indonesia will also be noted by the world for its respect of copyrights."

JAPAN

Australia Asks Firms To Join Satellite Project

OW0310024391 Tokyo KYODO in English 0029 GMT
3 Oct 91

[Text] Tokyo, Oct. 3 KYODO—The Australian Government has asked 14 major Japanese companies to join in building a launch base for commercial satellites in Queensland, a major Japanese economic daily reported Thursday.

Companies from Australia, Britain, the United States, and the Soviet Union already plan to participate in the project, the Nihon Keizai Shimbun said.

Australian Government officials came to Tokyo recently to discuss the project with companies from the construction, electronic, trading, and financial sectors and requested capital investment and technological assistance, the paper said.

If the Japanese companies decide to take part in the international project, it will be the first time for Japan to join an overseas satellite business, it said.

The base is expected to be ready to launch satellites in 1995 at the earliest.

The Soviet Union has offered at a low price its rockets capable of launching 2-ton-class satellites, according to the paper.

U.S. companies are to be in charge of conducting the launches.

KDD Wins Contract for Telecom Project in Sri Lanka

OW0810140191 Tokyo KYODO in English 1120 GMT
8 Oct 91

[Text] Tokyo, Oct. 8 KYODO—Kokusai Denshin Denwa (KDD) Co. said Tuesday its engineering subsidiary has received a contract for construction of international telecommunications facilities in Sri Lanka.

The giant international telecommunications company said the contract was awarded to KDD Engineering and Consulting Co. as a result of an international tender held in March.

The turnkey contract, worth about 210,000 dollars, calls for the company to design and build a land station and a telecommunications network for use in conjunction with an international telecom satellite.

KDD engineering will also provide operational and maintenance service for the facilities, the company said.

The project is to be completed in December 1993, it said.

Agreement With EC on High-Speed Digital Phone Testing

OW1610022991 Tokyo KYODO in English 2359 GMT
15 Oct 91

[Text] Brussels, Oct. 15 KYODO—Japan and the European Community wrapped up two days of regular telecommunications talks Tuesday with an agreement on conducting joint tests of high-speed digital telecommunications networks, Japanese officials said.

Under the agreement, Tokyo and Brussels will carry out such testing by connecting each other's high-speed digital telecommunications networks—known as integrated service digital networks [ISDN]—to determine whether the two systems are compatible, the officials said.

The tests will be implemented initially on ISDN phone and facsimile services and testing will be broadened to include other services in the future, they said.

ISDN facsimile services offered by Japan and the EC are broadly compatible as most of the high-speed facsimile machines used in the EC are Japan-made G-4 models, but it is unknown whether ISDN phone services in the two regions can be connected for common use.

In another area of agreement between the two sides, Japan and the EC shared the view that they must cooperate closely in hammering out proposed new rules on global telecommunications during the discussions being held prior to global trade negotiations under the General Agreement on Tariffs and Trade, the officials added.

Telecommunications is one of the 15 sectors of global commerce and trade covered by the Uruguay Round of GATT negotiations.

KDD To Join U.S.-Europe Fiber-Optic Cable Projects

OW1710132891 Tokyo KYODO in English 1237 GMT
17 Oct 91

[Text] Tokyo, Oct. 17 KYODO—Japan's overseas communications giant, KDD, on Thursday applied to the Posts and Telecommunications Ministry for approval of its plan to sign two U.S.-Europe undersea fiber-optic telephone cables construction and maintenance agreements.

The two cables are the Transatlantic Telephone Cable No. 10 and No. 11 (TAT-10 and TAT-11).

TAT-10, 7,700 kilometers long, will link the U.S. with Germany and the Netherlands and is scheduled to go into operation in August 1992.

TAT-11, 6,900 kilometers long, will connect the U.S. with Britain and France and is due to go into use in August 1993.

TAT-10 is estimated to cost 300 million dollars, of which 1.45 percent will be borne by KDD. The construction cost of TAT-11 is put at 280 million dollars, of which 0.57 percent will be paid by KDD.

Representatives of 36 telecommunications companies from 25 countries, including American Telephone and Telegraph Co. (AT and T), will sign the TAT-10 construction and maintenance agreement in Bremen, Germany, on October 29, and 27 companies from 17 countries the TAT-11 agreement.

Both TAT-10 and TAT-11 cables will carry a total of 22,680 circuits each.

NTT Develops Highly Sensitive Polymer

OW0910121391 Tokyo KYODO in English 1040 GMT 9 Oct 91

[Text] Tokyo, Oct. 9 KYODO—Nippon Telegraph and Telephone Corp. said Wednesday it has developed a highly sensitive polymer which could pave the way for production of ultrahigh-speed optical switching devices.

The giant telecommunications company said the new substance is 10 times more sensitive than lithium niobate, a typical nonlinear optical material widely used in optical switches.

The company said tests confirmed that electric-field sensors, which include the new material used for electro-optic sampling, are more sensitive, faster in response, and quieter than conventional ones.

Electro-optic sampling is a method for measuring and testing ultrahigh-speed, large-scale computer chips.

The company said the new material will also be used in large electronic circuits such as those on printed boards, as the sensors are easier to make and cheaper.

An experimental optical switching device made of the new material operated on less than five volts of electric force and remained effective when left at 80 degrees C for more than six months, the company said.

The company said the new material is widely applicable within the opto-electronics field, particularly in a device which controls optical messages through electric signals.

The company said it could also study the possibility of using the new material to develop a high-speed broadband optical switch.

SOUTH KOREA

Loral, GE Likely Successful Bidders for Satellite

SK1710132791 Seoul HANGUK KYONGJE SINMUN in Korean 16 Oct 91 p 12

[Text] Either the U.S. companies of General Electric (GE) or Loral is likely to be chosen for manufacturing the

satellite vehicle of the first domestic broadcast and communication satellite, the "Mugunghwa-ho."

The Ministry of Communications and Korea Communications Corporation on 22 July called for international bids for the contract to produce the "Mugunghwa-ho" satellite vehicle. They completed the evaluation of the bids' contents on 10 October. The result of the evaluation revealed that GE, which is affiliated with the Kumsong [Gold Star] Intelligence Communication Company; and Loral, which is affiliated with Hyundai Electronics Company, have passed the technological screening.

The U.S. Hughes Company, which is affiliated with (Samsung Electronics Co.), and the BAE [British Aerospace Enterprise], which is affiliated with Daewoo Heavy Industries), were excluded for the moment as a result of the technological examination.

The Korea Communications Corporation, with its 45 researchers (excluding overseas contractors), conducted comprehensive evaluation of the documents of bids on three occasions, and sent documents with a total of 481 questionnaires (369 cases on technology, 14 cases on technological transfer, 14 cases on finance, seven cases on administration and four cases on management) to the bidders. After having examined their replies, the corporation narrowed the bidders down to these two companies.

The model, "Series 3000" presented by GE, accords with the standard of the "Mugunghwa-ho." It is so technologically stable that it has been launched over 16 times. It passed technological screening at an early date.

It was learned that the Loral Company presented a most modern (?tri-axes)-type [samchuk-hyong] model similar to that of GE, and pledged technological transfer to the ROK, thus winning many points.

However, the "HS376" Hughes model, was of a round-type chiefly used for below middle-sized types. Therefore, it was pointed out that if the power output is increased, the source of electric power overstrains, and thus causes a defect. The BAE Company was excluded for the moment because of its short experience in satellite operation.

The Ministry of Communications and Korea Communications plan to conduct negotiations with GE and Loral over the issue of price beginning the end of this month. They will conclude the contract by mid-December. They plan to complete the manufacturing by December 1994.

The "Mugunghwa-ho" satellite, which will be launched in April 1995, will be comprised of two units—a main satellite and a supplementary satellite. Each unit is known to cost 75 billion won and thus the total cost would be 150 billion won.

U.S. Forces TV To Convert From VHF to UHF Channel in 1992

SK1810070491 Seoul YONHAP in English 0536 GMT 18 Oct 91

[Text] Seoul, Oct. 18 (YONHAP)—South Korea and the United States signed an agreement Friday on converting American armed forces television broadcasts in Seoul from a VHF to UHF channel, settling one of the most sensitive controversies between the two sides.

Under the agreement, American Forces Korea Network (AFKN) in Seoul will switch from VHF Channel 2 to UHF Channel 34 by the end of 1992.

Korea will pay the entire cost of the transfer, approximately 2 billion won (2.76 million U.S. dollars).

Transmitter power is initially set at 30 kilowatts and may be adjusted to ensure equivalent transmission power after conversion to UHF.

Chong Ho-tong, director of the Communications Ministry's broadcasting division, signed for the Korean side and Col. Richard Graves represented the U.S. Forces.

The 11-article agreement with a preamble states that AFKN "shall observe host country sensitivities," requesting the U.S. side to consider the possible cultural and social impact of its programs on Korean viewers.

There are some 43,000 U.S. troops stationed in Korea under the 1953 Mutual Defense Treaty, and AFKN has been broadcasting on Channel 2 since September 1957.

The U.S. hold on Channel 2 is highly criticized by Koreans because it has the highest transmission quality among the VHF Channels. It reaches all areas in and near Seoul, and there is criticism of it as unwanted cultural infiltration.

Negotiations began in early 1988 on the channel transfer, and the two sides began drafting the pact in April last year. Sources who took part in the negotiations said the cost and the transmitter power were the biggest impediments.

Korea Telecom To Invest 165 Billion Won in R&D Projects

SK1610043091 Seoul THE KOREA ECONOMIC JOURNAL in English 14 Oct 91 p 18

[Text] Korea Telecom reportedly plans to invest 165 billion won (\$222.9 million) or 4 percent of its 1992 turnover in various R&D (research and development) projects next year, company sources said.

The company also plans to supply 668,000 circuits of Korean-model time division exchange (TDX) switching systems next year, the sources said.

The R&D investment ratio for next year reflects an increase of 0.2 percentage point over the 3.8 percent targeted for this year.

The R&D spending estimate for next year also represents an increase of 31.7 billion won over the 133.5 billion won earmarked for this year, the sources explained.

With the R&D outlay, Korea Telecom intends to develop broadband integrated services digital network (B-ISDN) and next generation exchange machines, ATM (automatic teller machine), the source said.

The company will supply an additional 2,014,000 ESS (electronic switching system) telephone circuit lines next year, including 668,000 circuits equipped with TDX-10 systems.

This will increase Korea's overall telephone circuits to 19,514,000 by the end of next year, the sources said.

Korea Telecom will begin providing satellite telecommunications services during the first half of next year and commercialize CO-LAN (common local area network) services for corporations, colleges and research institutes, the sources said.

Korea Telecom also will supply 1,200 CSDN (circuit switched data network) circuits in Seoul and other major areas next year, the sources said.

British Firm Prepared To Transfer Technology to Daewoo

SK2210000891 Seoul THE KOREA HERALD in English 22 Oct 91 p 6

[Text] British Aerospace is prepared to transfer its communications satellite technology to their Korean partner Daewoo, a BAE [British Aerospace Enterprise] executive says.

"I think Daewoo will have every access to BAE's latest technologies from overall system design to testing through technology training programs reached between us," said David Edward McLaurin, managing director of the Communications Satellites Division of BAE had already transferred technology to Daewoo in the manufacture of jet trainers (Hawk series) two years ago.

BAE is one of the four international bidders to become the prime contractor of Korea's first communications satellite dubbed "Mugunghwa," or Koreasat. It will be launched into orbit in April 1995.

The other three bidders are GE [General Electric] Aerospace, Hughes Aircraft and Loral Space System all of the United States.

The Korea Telecom-hosted Koreasat programs require massive technology transfer. The four bidders have formed partnerships with Korean companies and signed technology transfer agreements.

Korea Telecom is to announce two companies who meet technology requirements for the project within this week. The final decision on the main contractor is scheduled to be made at the end of December.

"I believe that our proposal is commercially competitive and technologically sound," the British executive said.

McLaurin said that for the Mugunghwa project, BAE has formed a consortium with TRW of the United States and Daewoo as major partners with two other supporting subcontractors, France's MATRA and Germany's Dornier.

BAE would be responsible for overall system design, configuration, integration and testing along with procurement of land vehicle and placement of the satellite in orbit, the executive said, adding that TRW will provide communications payload.

Daewoo would manufacture a large part of satellite structure for Koreasat and MATRA would produce pieces of hardware, including position control units.

He said BAE has put 11 communications satellites into orbit since 1978 as the biggest supplier in Europe, with no reports of function failure.

LAOS

PRC Company Sets Up Phone System in Vientiane

BK2010134491 Vientiane Vitthayou Hengsat Radio Network in Lao 0000 GMT 17 Oct 91

[Excerpts] In compliance with the spirit of the Laos-China cooperation agreement signed by the governments one year ago, the Asia-Pacific Electronics Company Limited of the PRC recently installed a radio signal telecommunication or (?phone link) system in Vientiane Capital to service the public within the municipality. The radio signal telecommunications or (?phone link) system is a cordless telecommunication transceiver. [passage omitted]

Mr. (Lu Jian), executive director of the company said all the equipment installed for the operation of the system had been manufactured in China. The total installation cost of this system is worth some U.S. \$350 million [as heard]. The radius of its communications capability is 35 kilometers. In carrying out its initial operations, the company received excellent cooperation from the Lao Government. A company source said the management of the enterprise will do its best to win the trust of the Lao Government.

MALAYSIA

TV Stations May Stop U.S. Programs

BK0510095291 Kuala Lumpur BERNAMA in English 0311 GMT 5 Oct 91

[Text] Kuala Lumpur, Oct 5 (BERNAMA)—State-owned Radio and Television Malaysia (RTM) and the only private television, TV3 may stop airing programmes from the United States if TV programme

distributors in the U.S. force Malaysia to adhere to the Berne Convention, Malaysian Information Minister Mohamed Rahmat said Saturday.

He said the convention required Malaysia to use the coded signals in the reception system and this would limit the reception to areas within the country only.

At the moment, with the use of the Palapa and Intelsat satellite, our transmission can be received in Singapore, South Thailand, Brunei, Indonesia, Vietnam, Australia and the Philippines, he said after receiving U.S. Information Agency Director Henry E. Catto here.

Mohamed said RTM and TV3 were now paying three times the amount paid by Singapore and Brunei for first run tv programmes and might have to pay more in the future.

Minister, DPRK Group View Broadcasting Cooperation

BK1710073691 Kuala Lumpur Voice of Malaysia in English 0800 GMT 17 Oct 91

[Text] The minister of information, Datuk Mohamed Rahmat, has stressed the need for broadcasting organizations in the South to foster understanding. This could be done through the exchange of radio and television programs. Such an exchange will enable peoples living in developing nations to understand each other better. This is especially so as the media in the West has not been very positive in its reports on the developing world. Through such an exchange, especially of news items, the developing countries can relate to events through their own perspectives. He was speaking to a North Korean delegation that paid a courtesy call on him.

Datuk Mohamed Rahmat also suggested an agreement on broadcasting and information be considered between the two countries. He felt that by becoming a member of Asiavision, events in North Korea could be telecast in many Asian countries, and at the same time such events could be used by European and American networks which also subscribe to Asiavision.

The leader of the Korean delegation, Mr. (Choe Song-su), said in the spirit of nonalignment and South-South cooperation there should be an exchange of programs between North Korea and Radio Television Malaysia.

NEW ZEALAND

TVNZ Sells Service to Western Samoa

BK0810095291 Hong Kong AFP in English 0917 GMT 8 Oct 91

[Text] Wellington, Oct 8 (AFP)—State owned Television New Zealand (TVNZ) is to establish a television service in Western Samoa, the company said Tuesday.

The Western Samoa Government had approved TVNZ's proposal in principle and a working committee of government officials and TVNZ executives could meet to discuss details within the next two weeks, TVNZ chief executive Julian Mounter said in a statement.

The decision to accept TVNZ's proposal represented a significant development for the company's Pacific service operation and a further step towards "internationalisation," he said.

Nauru, the Cook Islands and Niue already took the service and the company was also operating a temporary service in Suva, Fiji and in Western Samoa for the length of the Rugby World Cup.

The service was set up to enable Pacific Island countries to establish locally produced, low-cost television services, Mounter said.

The company also provided general programmes distributed by videotape and also live news, current affairs and sports transmitted using TVNZ's satellite network.

Since the early 1960s Western Samoa has received up to five channels from neighbouring American Samoa.

SINGAPORE

BBC World Service TV Launches Asian Service

BK1510113991 Singapore *THE STRAITS TIMES*
in English 15 Oct 91 p 19

[Text] BBC World Service Television (WSTV) launched its Asian service in Singapore yesterday with a "live" satellite hook-up—a publicity event which was more symbolic than real here.

The news and information service is carried by Hongkong's Star TV and beamed via satellite to 38 Asian countries.

It will be shown from 7 pm to 9 pm from today, with the full 24-hour service starting in mid-November.

Its inauguration in London by Princess Anne was shown "live" in Singapore and seven other Asian capitals.

Here, the screening was for the press and other invited guests at a hotel.

A four-metre satellite dish was rented for the occasion.

WSTV is a so-called "free-to-air" service, which means that anyone with a satellite dish can pick it up without a decoder.

It is beamed down by the AsiaSat I satellite, which is in orbit directly over Singapore.

In Singapore, however, household use of satellite dishes is banned. And although dozens of banks, businesses and public bodies have been granted licences, only a handful have actually bought and installed dishes.

Most are waiting for details of the 24-hour news channel to be launched next April on a subscription basis by Singapore Cablevision Singapore Broadcasting Corporation's [SBC] new subsidiary.

SBC has been negotiating to relay CNN International and WSTV on the subscription channel.

A typical hour of WSTV's schedule includes world news and an Asian regional bulletin, followed either by documentaries, current affairs programmes, chat shows or children's programmes.

There are also business reports timed with the major international market closings.

Star TV, WSTV's partner in the venture already has to other free-to-air satellite channels, carrying sports and music.

It will be adding two more: a general entertainment channel and a Mandarin channel, to which SBC has sold two serials.

THAILAND

Direct Phone Links Established With SRV, Cambodia

BK1810065191 Bangkok *BANGKOK POST* in English
17 Oct 91 p 17

[Text] The Communications Authority of Thailand (CAT) yesterday announced the start of ISD [International Subscriber Dialing] direct telephone calls from Bangkok to receivers in Vietnam and Cambodia to cope with increasing business in the two Indochinese countries.

Under the ISD system, the caller could directly dial receivers in both countries without having to pass through an operator.

When dialing, the caller would dial 001, followed by the country code, city code and end number. Vietnam's country code was 84, the city code for Hanoi was 4, Ho Chi Minh City was 8, the country code for Cambodia was 855, and the city code in Cambodia [as published] was 23.

The service charge would be five baht for the first six seconds in Vietnam and 6.30 baht for Cambodia. The rate would be 20 percent lower when the call was made between 9 p.m. and midnight or 5 a.m. to 7 a.m., and 30 percent less between midnight and 5 a.m.

The CAT said there was an average of 500 calls to Vietnam daily at present and this total was increasing.

Live TV Broadcast to Eight Asian Capitals

BK1210133091 Bangkok Radio Thailand Network in English 0000 GMT 12 Oct 91

[Text] A live international satellite broadcast will be launched by Star TV on Monday [14 October] linking Hong Kong and London live to eight Asian capitals—Beijing, Singapore, Bangkok, Seoul, Taipei, Jakarta, New Delhi, and Dubai.

The event is to launch the British Broadcasting Corporation's Pan-Asia World Service Television on Star TV based in Hong Kong.

The launch in Thailand will take place at the Shangri-la Hotel's Ballroom 2 from 5 p.m. onward.

The broadcast includes remarks and appearances by key executives and dignitaries with the BBC ceremony from London with Her Royal Highness Princess Ann presiding followed by a special BBC retrospective program.

[Word indistinct] Vision in Hong Kong created Star TV to serve the Asian region with its preview channel officially launched on 15 May 1991 on air 24 hours a day across the entire area of the satellite footprint. It has signed an agreement with the BBC World Service Television, a wholly-owned subsidiary of the BBC Incorporated in March 1991.

Through Thai Sat, Star TV has its backup earth station in Thailand agreed to by the Cabinet on Tuesday [8 October].

VIETNAM

Tra Bong District Color TV Relay Station Commissioned

BK1410072291 Hanoi Voice of Vietnam Network in Vietnamese 1430 GMT 13 Oct 91

[Text] The mountainous district of Tra Bong, Quang Ngai Province, has recently commissioned its first color television relay station. The district has invested 123 million in installing a broadcast transmitter and a parabola antenna.

The station can receive various programs broadcast from the central television station, and air live and taped broadcasts. After a trial of broadcasting before final acceptance, the station showed that it operated well within a radius of 15 kilometers.

Vice Premier Receives Australian Radio President

BK0910084091 Hanoi VNA in English 0553 GMT 9 Oct 91

[Excerpts] Hanoi VNA Oct 9—Vice Premier Nguyen Khanh told radio ABC President Malcolm Long on Monday he hoped that the Australian Broadcasting

Corporation would be the forerunner in assisting radio Voice of Vietnam in personnel training and upgrading its broadcasting facilities.

In a talk with Mr. Malcolm Long in Hanoi, Vice Premier Nguyen Khanh expressed the Vietnamese Government's thanks to the Australian Government and radio ABC for their efforts to promote the existing cooperation between the two countries, particularly in field of radio broadcast and television.

Nguyen Khanh also told the radio ABC president the significance of wireless communication in Vietnam, a country with more than 90 percent of its population living in the countryside where radio programmes are an important means to keep people well informed of what is going on in the world, as well as in Vietnam. He said he hoped that in future Australia would also help Vietnam produce high-quality radios at affordable prices.

In reply, Mr. Malcolm Long thanked the Vietnamese Government officials for their warm reception. He expressed his hope that with support from the two governments cooperation between radio ABC and Voice of Vietnam would further develop. [passage omitted]

Officials Attend Seminar on Sony's TV Equipment

BK0810134991 Hanoi Vietnam Television Network in Vietnamese 1200 GMT 4 Oct 91

[Text] A three-day seminar on television equipment produced by Sony Corporation was jointly organized from 2-4 October by the Vietnam Television Network and the Japanese Sony Corporation.

Attending the seminar were Comrade Phan Van Khai, first vice chairman of the Council of Ministers; Comrade Tran Hoan, minister of culture, information, and sports; Comrade Tran Xuan Giao, chairman of the Office of the Council of Ministers; Comrade Nguyen Dy Nien, deputy minister of foreign affairs; Comrade Huu Tho, vice chairman of the party Central Committee Ideology and Culture Commission; Comrade Mai Ky, vice chairman of the State Planning Commission; Comrade Nguyen May, vice chairman of the Foreign Investment and Cooperation Commission; representatives of the various central organs concerned; and many cadres of the Vietnam Television Network and nineteen northern television stations.

Mr. Hiroyuki Yushita, Japanese ambassador to our country, and many specialists of the Sony Corporation and other Japanese firms in our country also attended the seminar.

Mr. Pham Khac Lam, director general of the Vietnam Television Network, and Mr. (Shimaju), general managing director of the Sony Corporation, addressed the opening of the seminar.

The objective of the seminar is to introduce to Vietnamese television workers the new technological innovations and techniques relating to the utilization and maintenance of the corporation's television equipment.

Sony is producing special purpose, high-quality television equipment in use all over the world.

The seminar also aims at equipping Vietnamese television cadres with modern technical knowledge needed to enhance the quality of television programs and to expand the coverage of the Vietnam Television Network.

Hanoi-Mon Cai Microwave Communication Line Implemented

*BK0510075191 Hanoi VNA in English 0607 GMT
5 Oct 91*

[Text] Hanoi VNA October 5—A 195-km-long digital microwave communication line in Quang Ninh Province, northeast of Hanoi, has been put to use.

This is the longest intra-provincial digital microwave communication line in the country, which consists of 30 channels and four relay stations, built with local budget and equipment from the Awa firm of Australia.

The newly-built communication line helps facilitating communications within the province as well as its links with different localities in the country and the world.

Satellite Reception System Invented

*BK1910135591 Hanoi Vietnam Television Network
in Vietnamese 1200 GMT 17 Oct 91*

[Text] After more than six months of research and experimentation, the technical research and development center of the Vietnam Science Institute and the material and technical supply corporation of the Ministry of Culture, Information, and Sports have successfully invented a new system for receiving satellite transmission.

The system has been announced and evaluated. The result shows that except for one element that had to be imported, the quality of this system is, in general, equivalent to that of the same type manufactured in foreign countries while its production cost is cheaper by half.

This success has opened a new possibility for expanding the television network to all mountainous regions and off-shore islands.

HUNGARY**Telecommunications Network Purchases Intelsat Equipment**

*LD1410173491 Budapest MTI in English 1643 GMT
14 Oct 91*

[Text] Budapest, October 14 (MTI-ECONews)—Hungary's telecommunications network, Matav, has signed a deal with the Japanese company NEC to buy two Intelsat standard-a terrestrial stations. The contract is worth 614 million yen, a Matav official said on Monday afternoon.

The two stations will enable Hungary to join the AOR (Atlantic Ocean Region) and the IOR (Indian Ocean Region) telephone and data transmission satellite networks.

Matav has also concluded a 95-million-yen contract with Fujitsu, also of Japan, to buy the 140 megabyte/SEC digital microwave system required to operate the stations.

Matav plans to join the AOR network in autumn 1992 and the IOR system sometime in 1993.

POLAND**New Telephone Exchanges Planned for Silesia, Lodz**

*LD2010170191 Warsaw PAP in English 2201 GMT
19 Oct 91*

[Text] Katowice, Oct 19—Polish Post, Telegraph, and Telephone signed contracts for nearly three trillion zlotys (about 270 million U.S. dollars) with Siemens of Germany for the supply of telephone exchanges to be installed in the industrial region of Katowice and the central agglomeration of Lodz.

The contracts provide for the supply of international, intercity, and other exchanges as well as new radio and fiberoptic lines for both regions.

Part of the equipment will be donated by Siemens and the credits required for the operation are granted at low interest.

REGIONAL AFFAIRS

Participation in TV Network Planned for 1992

PA0910040591 Mexico City XHTV Television Network in Spanish 0200 GMT 8 Oct 91

[Text] The Americas Network [La Cadena de las Americas] will link all Latin American countries, Spain, and Portugal by television from 1 April to 12 October 1992. Cuba has already formalized its participation. Enrique Roman Hernandez, president of the Cuban Institute of Radio and Television (ICRT), visited Mexico to sign the agreement.

The network is scheduled to transmit programs produced by each of its member countries five hours a day by satellite. The programs will be seen simultaneously in all participating countries. The purpose of this vast television network is to give the Ibero-American countries the opportunity to speak for themselves. The ICRT's president has said that the network is one of the best ways to contribute to Ibero-American integration.

[Begin Roman recording] I believe that television allows Ibero-American integration to forge ahead with a speed and an efficiency that otherwise would be very difficult to attain. I think this network will give us unprecedented possibilities—possibilities that will be even greater in future initiatives—to get to know one another and to strengthen an identity that we could lose. This identity links all Ibero-American peoples. [end recording]

Roman added that the Americas Network will encourage creativity.

[Begin Roman recording] We hope to use Cuban literature and culture to stimulate the efforts of not only our television producers but also of our scientists, historians, and sociologists to help make us better known abroad. [end recording]

ARGENTINA

ANSA News Agency Dedicates New Electronic System

PY2210003091 Buenos Aires LA PRENSA in Spanish 19 Oct 91 p 3

[Text] ANSA news agency has dedicated in this capital a new electronic system for the transmission of its news items in Spanish.

The news is transmitted via satellite for all of Latin America, United States, and Canada within the framework of an agreement between ANSA and REUTER to jointly use the INTELSAT geostationary satellite.

The transmission of the news items, of approximately 60,000 words per day, will be made via satellite at a 300 baud speed in small and capital letters.

The news service in Italian for abroad, with more than 30,000 words per day, also is transmitted simultaneously via satellite with the same system and characteristics to the whole American continent.

The new system is made up of three D-COM processors [elaboradores] supplied by the Italian company Telpress, which also provided the operations software [preceding word in English] in keeping with the editorial demands of ANSA.

The processors have a 900-megabyte memory and are connected to a network of personal computers used by ANSA journalists. The processors also administer 48 lines for any kind of communication with or without protocol, including international commutation per pack.

The ceremony in which the new system was dedicated was attended by ANSA Director Bruno Caselli and Administrative Manager Sergio Capelli, as well as Argentine journalists and newspaper directors, international news agency representatives, Italian company representatives, and diplomats.

BOLIVIA

New Radio Station Begins Transmissions in El Alto

PY1110203491 La Paz EL DIARIO in Spanish 3 Oct 91 p 8

[Excerpt] At noon yesterday, "Radiodifusoras Integracion," a radio station located on 2d Street of the 12 de Octubre zone in the city of El Alto, officially began its transmissions. The station's slogan is "Our Words Will Be Better Than Silence."

Engineer Juan Carlos Blanco, the general manager of the new station, officially began the transmissions and thanked industrialist Max Fernandez Rojas for his support, because without his cooperation it would have been impossible for the El Alto people to have a local station. [passage omitted]

BRAZIL

Agreement on Joint Satellite Project Signed With PRC

PY1710010691 Brasilia Voz do Brasil Network in Portuguese 2200 GMT 16 Oct 91

[Text] The Brazilian and PRC Governments have signed an agreement on the joint construction of a long-range satellite that will reduce both countries' dependency on images generated by U.S. and European satellites.

The Science and Technology Secretariat has signed an agreement with the PRC Government that will allow contracting of the first enterprises to be involved in building a remote tracking satellite developed by both countries.

The agreement on construction of the Brazilian-Chinese satellite was signed in 1988, but remained inactive due to Brazil's lack of funds to finance the project. According to the agreement, Brazil must finance 30 percent of the expenditures, which amount to \$45 million.

The Brazilian Government was supposed to disburse \$10 million this year but the Science and Technology Secretariat only received \$2 million. A request for the remaining \$8 million is currently in Congress.

Science and Technology Secretary Edson Machado de Souza believes Congress will approve disbursement of the remaining \$8 million, so much so that during his visit to the PRC last week, he got the PRC counterpart to release its resources in order to begin construction of the satellite.

Edson Machado explained the advantages that the joint project has for Brazil:

[Begin recording] The biggest advantage is that we will acquire technology and will train technicians and scientists of the National Institute of Space Research [INPE], which will acquire technology that Brazil still lacks; that is, the expertise for construction of large satellites. [end recording]

The remote tracking Brazil-PRC satellite is scheduled to be launched in 1994 and will allow the two countries to be less dependent on images produced by U.S. and European satellites.

National Industry To Manufacture Optical Fiber

PY1910025891 *Brasilia Voz do Brasil Network*
in Portuguese 2200 GMT 18 Oct 91

[Summary] With technology developed by Telebras [Brazilian Telecommunications, Inc.], Sao Paulo will begin to manufacture optical fibers on an industrial level. National Communications Secretary Joel Rauber has reported that the manufacture and use of optical fibers will place Brazil in a privileged technological position. He also reported on the installation, by private companies, of mobile telephone systems in six Brazilian states: Sao Paulo, Rio de Janeiro, Rio Grande do Sul, Parana, Minas Gerais, and Bahia.

Further Details of Joint Satellite Project With PRC

PY1710021291 *Rio de Janeiro O GLOBO in Portuguese*
16 Oct 91 p 14

[Text] Sao Jose Dos Campos—In November Brazil will resume participation, together with the PRC, in the construction of two satellites for natural resources research. The project, estimated at \$150 million, was interrupted two years ago due to a lack of funds. Brazil is supposed to finance \$50 million [as published] and honor a \$2 million debt, a PRC requirement for continued participation in the project.

The Brazilian Government expressed its desire to continue cooperating in a letter that President Fernando Collor addressed to the PRC Government last September. In late November, seven PRC scientists will come to discuss with Embraer [Brazilian Aeronautics Company] the transfer of technology for construction of the satellite's structure. The second satellite of its kind will be tested by the National Institute of Space Research (INPE).

According to the program, Brazil is responsible for developing and producing a series of items, which it was unable to do in the past two years. On the PRC side, the program developed by the PRC Space Science and Technology Academy (CAST) was not interrupted.

The Brazilian-Chinese Earth Resources Satellite (CBERS) falls within the framework of an agreement signed in July 1988. The satellite should be launched by a PRC rocket in 1992, but, according to INPE scientists, it is more likely that it will be launched in 1995. The CBERS will be equipped with the most modern equipment capable of photographing objects on the earth larger than 10 meters.

Most of the time the satellite will be monitored by the PRC. It will be used to obtain information on deforestation, mineral resources, the development of harvests, and other missions. Brazil will get one third of the resources obtained through the sale of satellite services.

Manchete Television Sale Suspended

PY0310015291 *Rio de Janeiro O GLOBO in Portuguese*
2 Oct 91 p 26

[Summary] Brasilia—Deputy Paulo Octavio, of the Brasilia National Renewal Party, announced in a speech in the Chamber of Deputies on 1 October that negotiations for the purchase of the Manchete Television Network has been suspended. He did not report, however, on the reasons for suspending the transaction.

Minister Signs Communications Accord in Rome

PY0510171691 *Rio de Janeiro Rede Globo Television*
in Portuguese 2300 GMT 4 Oct 91

[Text] Mato Grosso State will become the major user of satellite communications in South America; a new rural telephone system is part of an agreement signed in Rome by Infrastructure Minister Joao Santana.

The Italian Government will finance the project, which is estimated to cost \$50 million. Some 26 isolated cities will have access to communications, and the quality of the telephone systems in another 100 cities will be improved.

Italy will provide the technical equipment. Victor Communication, an organization comprised of Globo Participations, Bradesco [Brazilian Discount Bank], and Victor International, will be in charge of the ground installations. The project approved by the Brazilian and

Italian Governments will benefit over 650,000 people; within three years, when everything is operating, they will be able to communicate anywhere without problems.

[Begin Santana recording] We should point to the fact that the Italian Government, during a difficult moment for Brazil, has displayed great trust in the Collor administration by granting this credit for such a very important area as telecommunications. [end recording]

After the signing of the agreement, Santana and (Roberto Marino), vice chairman of the Globo organizations, visited STET [Turin Telephone Finance Company], the Italian equivalent of Brazil's Telebras [Brazilian Telecommunications], where only 14 people control the country's mobile telephone system. This is one of the most advanced telephone systems in the world, benefiting some 500,000 Italians. STET wants to invest in Brazil. A group including O GLOBO, Bradesco, and Montero Arana participated in bidding to exploit this mobile telephone system.

International Telecommunication Service Fees Increase

PY0810013091 Brasilia Voz do Brasil Network
in Portuguese 2200 GMT 7 Oct 91

[Summary] Fees for international telephone calls, telexes, and mailing services have increased by 25 percent.

Minister Signs Telecommunications Contract in Italy

PY0410013691 Brasilia Voz do Brasil Network
in Portuguese 2200 GMT 3 Oct 91

[Summary] Infrastructure Minister Joao Santana signed an agreement in Italy today for the implementation of a net of rural satellite-tracking ground stations and two routes for telephone transmissions in Mato Grosso do Sul. The Italian company (Telespazio) will be responsible for the project, which will cost an estimated \$58 million.

CHILE

Entrepreneurs Negotiate Use of Soviet Satellites

PY0910221291 Santiago EL MERCURIO in Spanish
4 Oct 91 p B16

[Text] A group of Chilean entrepreneurs, associated with an important company linked to the telecommunications sector, have held negotiations with Intersputnik, an

organization administering satellite systems for East European countries. These negotiations have been conducted for months in a confidential manner. A document already was signed in Moscow in early September. This document establishes the basis for conducting negotiations.

The agreements that will be reached in the future will significantly contribute to improving communications between the two countries.

Despite the strict confidentiality of these talks, Transfer [preceding word in English] Investments General Manager Juan Carlos Fernandez, who is handling the project, has confirmed the existence of these negotiations. It also was leaked that the aforementioned company is reportedly associated with a company of the V.T.R. [expansion unknown] Group.

MEXICO

NOTIMEX and Brazil's RADIOBRAS Sign Agreement

PA0310180391 Mexico City NOTIMEX in Spanish
1530 GMT 1 Oct 91

[Excerpts] Brasilia, 1 Oct (NOTIMEX)—NOTIMEX, the Mexican News Agency, and its Brazilian counterpart RADIOBRAS [Brazilian Broadcasting Company] signed an agreement today. The agreement calls for both agencies to exchange and broadcast information on issues of common interest.

RADIOBRAS Director General Ruy Pontes said this agreement opens enormous possibilities for rapprochement and strengthens the relationship between Mexico and Brazil. "This brings Brazil and Mexico closer than ever as far as Latin American integration is concerned," the leader of the Brazilian state enterprise added. [passage omitted]

The agreement calls for a daily exchange of information between both agencies, which agreed to broadcast this information in their respective countries.

NOTIMEX news will reach about 150 million Brazilians that include potential readers, radio listeners, and television viewers of RADIOBRAS nationwide.

RADIOBRAS news will reach 27 million Mexicans if just the 300- plus subscribers of newspapers and radio and television stations that currently receive NOTIMEX services are taken into account.

Commercial Director Jacobo Vega and International Operations Deputy Director Hugo Morales signed the agreement on behalf of NOTIMEX Director General Pablo Hiriart Le Bert.

INDIA

First Indigenous Satellite To Be Launched

BK1410160491 Delhi All India Radio Network in English 1530 GMT 14 Oct 91

[Text] The country's first indigenously built geostationary satellite INSAT-2A will be launched in February. This has been announced by the European satellite launching company, the Ariane Space.

New Radio Station Inaugurated in Rajasthan

BK0910045891 Delhi Doordarshan Television Network in English 1600 GMT 8 Oct 91

[Text] In Rajasthan, a new AIR [All India Radio] station has started functioning in Banswara. The deputy information and broadcasting minister, Ms. Girija Vyas, today inaugurated the station. This is the 124th station in the country and 10th in Rajasthan.

Papers Report on Second Remote Sensing Satellite

Fully Operational

92WT0011A Madras THE HINDU in English 17 Sep 91 p 4

[Text] New Delhi, Sep 3—The second Indian remote sensing satellite, IRS-1B, launched on August 29 from the Soviet Union, will become fully operational by 15 September, after some orbital corrections are carried out, announced the space commission chairman, Prof. U.R. Rao, here yesterday.

Prof. Rao told reporters soon after his arrival in the capital from Moscow today that the second linear imaging self scanning (LISS) camera would be switched on either on 5 or 6 September. The first LISS camera was switched on last Friday, a day after the launch, and has sent excellent pictures.

After LISS-II becomes operational, tiny thrusters aboard the satellite will be fired to raise the spacecraft to its final circular, sun-synchronous orbit at 904 km from the earth surface, said Prof. Rao, who is also the secretary, department of space.

IRS-1B, weighing about 990 kg, was launched from Baikanur cosmodrome in the USSR, using a Vostok rocket at 12 hours 18 minutes 23 seconds (IST) on August 29. IRS-1A was also launched from the same cosmodrome on March 17, 1988.

The sun-synchronous orbit will ensure that the orbital plane of the satellites is always at the same angle from the sun-earth axis. This means the satellite will pass over a particular area at the same local time which will help comparison of data collected during different orbits.

The satellite takes 103 minutes to complete one revolution around the earth. It will make 14 orbits around the

earth in a day. As each orbit will take it away from the equator by 2,872 km, the satellite will cover the entire country once in 22 days.

Prof. Rao said IRS-1A has completed its designed life-period of three years. However, it is likely to remain operational for another 12 to 18 months. The operational life of a satellite depends on the fuel carried aboard. The satellite drifts from its assigned place and is brought back by firing tiny rockets.

With the combined use of both the satellites, it is now possible to cover the country once in 14 or 15 days.

The space chief said the third satellite in the series, IRS-1C is expected to be launched in 1994 from the same cosmodrome. An agreement to launch IRS-1C at a cost of Rs 30 crores (to be paid in Indian currency only) has already been signed with the Soviet authorities.

The political turmoil in the country will not affect the launch schedule, he said. Though many rockets were available for the purpose, the Soviet launcher was selected after careful consideration of various factors, he added.

India paid the USSR only Rs 7.5 crore for the launch of IRS-1A. The IRS-1B launch fee was Rs 22 crore.

IRS-1A has so far sent 3.5 lakh pictures which were put to a variety of uses. The pictures were comparable in quality to those obtained from French Spot and American Landsat satellites. India stopped buying the French satellite pictures from January last.

The data was used for acreage and yield estimation of crops like rice and wheat. Crop acreage estimation of sorghum, mulberry and cotton was also done using the data. The data is also used to study forest cover mapping and estimation of ground water potential.

More plans to utilize the data are in the offing, he said.

Remote sensing from space has several advantages for a developing country like India as it provides vital inputs for the management of its vast land and ocean resources. Observations from space has the advantage of providing a synoptic view of large areas in a repetitive, reliable and cost-effective manner.

Giving details about the first imagery sent by Liss-I, Prof. Rao said the image covers an area of 148 km x 174 km in parts of south-east Andhra Pradesh and adjoining Tamil Nadu. Important places such as Tirumala-Tirupati, Kalahasti, Sriharikota, Chittoor, Kanchipuram and Madurantakam were covered.

IRS-1B is monitored and controlled by the Indian Space Research Organization (ISRO) telemetry tracking and command network (ISTRAC) with its spacecraft control center located at Peenya, Bangalore.

The imagery data from the satellite is received at the national remote sensing agency (NRSA) station at Shadnagar, near Hyderabad. After processing at the NRSA facility in Balanagar, Hyderabad, the data products in the form of computer compatible tapes, cartridges, flossies, and photographs will be supplied to the users.

Further Details Given

92WT0011 Bombay *THE TIMES OF INDIA*
in English 4 Sep 91 p 11

[Text] Bangalore, Sep 16—India's second remote sensing satellite, the IRS-1B was declared fully operational today demonstrating the country's capability for providing world class remotely-sensed imageries on a continuous basis, Prof. U.R. Rao, ISRO chairman, said here today.

Soon after the satellite's operationalization was announced by the mission control here Prof. U.R. Rao told news agencies that the quality of pictures from the IRS-1B was "simply fantastic." The spacecraft had behaved "excellently" since the launch and was expected to last beyond its three-year planned lifetime, he added.

All crucial post-launch maneuvers including the critical orbit-trimming were carried out in a flawless manner. The linear imaging and self-scanning (liss) cameras have been calibrated for use upto the expected three year lifetime.

The satellite is circling the earth in a polar sun-synchronous orbit from the altitude of 904 km mapping the entire country once every 22 days.

Maritime Satellite Station Planned for Pune

92WT0012A Bombay *THE TIMES OF INDIA*
in English 19 Sep 91 p 4

[Text] Bombay, Sept. 18. The first INMARSAT earth station in India will be commissioned at Arvi near Pune by the middle of 1992 and this will fulfill the communication needs of Indian shipping, Mr. B.K. Syngal, chairman and managing director, Videsh Sanchar Nigam Ltd said yesterday.

INMARSAT (International Maritime Satellite Organization) is an internationally owned cooperative which provides mobile communication worldwide. It was established in London in 1979 and provides communication links on land, at sea and in the air.

Mr. Jaspal Singh's counsel, Mr. Shanti Bhushan, yesterday urged the constitution bench headed by Mr. Justice B.C. Ray, to issue notice to the speaker who had refused to abide by the court's order and also declined to reply to the notice issued on the petition challenging the disqualification under the anti-defection law.

However, the court decided to take up the contempt petition on September 24 when other similar matters

including applications seeking stay of the disqualification orders passed by various speakers come up for hearing.

Mr. Mulani ordered Mr. Jaspal Singh's disqualification when the latter defied the whip issued by the breakaway Janata Dal (G) to vote for the chief minister, Mr. Chimanbhai Patel, following the split in the party.

Country's 123d Radio Station Inaugurated in Rajasthan

BK0410150091 Delhi *All India Radio Network*
in English 1430 GMT 4 Oct 91

[Text] In Rajasthan, a new local AIR [All India Radio] station at Nagore went on the air this evening. The station was inaugurated by the deputy minister for information and broadcasting, Dr. Girja Vyas. This is the 123d AIR station in the country and ninth in Rajasthan. Speaking on the occasion, Dr. Vyas said that after completion of all the Seventh Plan projects, 98 percent population of the state will get covered by the radio program.

Hitches in Attracting Telecom Giants Noted

92WT0013A Madras *THE HINDU* in English
10 Sep 91 p 9

[Text] New Delhi, Sept 9. Leading Global telecom giants such as AT&T, NEC, Siemens, Northern Telecom and CIT Alcatel have expressed their desire to come to India, but the monopoly of the Department of Telecommunications (DoT) in the purchase of mainline equipment has apparently deterred them.

The Communications Minister, Mr. Rajesh Pilot has had preliminary discussions with the representatives of both AT&T of USA and CIT Alcatel of France. Reports circulating in Sanchar Bhavan indicated that Mr. Pilot in his discussions with Alcatel had suggested that the French company should first pass on its latest technology to the public sector Indian Telephone Industries (ITI) with whom it had an ongoing collaboration before it thought of tying up with Dr. B.K. Modi (of Modi Group) for setting up another electronic switching system factory in the country.

Surprise: But informed sources said ITI had already signed a memorandum of understanding with Alcatel to upgrade its technology from the existing E 10B to the new P 11E version of electronic exchanges. The sources, therefore, expressed surprise that the superiors should have insisted on a point which for all practical purposes had already been settled.

A news item in a major daily from the capital today that the Alcatel-Modi tie-up may be given a conditional clearance has raised eyebrows in the industry. It was not because Alcatel would set up yet another unit, but because of the positive political relationship of the partner with the ruling party.

For instance, some of the telecommunication giants mentioned above have already submitted their proposals for setting up manufacturing units in the country based on the new industrial policy which provides for 51 per cent foreign equity with automatic clearance facility subject to certain conditions relating to the import of capital goods and repatriation of dividend. The proposals were, however, reported to be more in the form of an intent to come to India.

High-level panel: Siemens AG of West Germany has already submitted an offer letter to the Communications Ministry about its intention to tie-up with WEBEL (a West Bengal Government electronics company) for setting up a one million lines electronic switching factory near Calcutta. This particular proposal also talks of foreign exchange neutrality and meeting its components import requirement through export of software.

A senior official of the DoT told *The Hindu* that a high-level committee was being set up in the Communications Ministry to go through the various proposals and fix norms to satisfy the network requirements of DoT. The official, however, denied that the Committee would "wet the proposals."

What, however, takes the cake is the formation of the committee itself. For instance, the Siemens proposal (or letter) had reportedly been submitted to the Foreign Investment Promotion Board (FIPB) in the Prime Minister's Office but was deflected to the Communications Ministry. The FIPB has been set up with the aim of bringing global giants to India in select fields, telecom being one of them. But with DoT enjoying monopoly in services and hence the purchase of equipment, the FIPB can do very little to attract global telecom giants. As the sources said, it was perhaps because of this mismatch that the Minister of Communications, Mr. Pilot has apparently decided to set up the committee to assess the offer of each of the multinational telecom company.

But even before the formation of the committee has been officially announced, news about the status of select proposals have been leaked, like the reported clearance of tie-ups with major MNCs such as General Electric, BMW, IBM etc. Interestingly none of these proposals have actually been cleared on file till now. The telecom story is therefore no exception.

Scaled down: Yet another interesting aspect of the telecom development was the scaling down of the income (sales and services) target of ITI for 1991-92. According to figures compiled by the Communications Ministry, ITI's income for 1990-91 has been reported at Rs 1003.7 crores as against the budget estimate of Rs 1,387 crores for the same year. For the current financial year 1991-92, ITI's income according to the MOU, signed with the Ministry of Communications has been targeted at just Rs 1,049.02 crores. In a sense it was slightly higher than the actual income of ITI recorded for

1990-91. The profit before tax for 1990-91 (actuals) was Rs 70.07 crores and is estimated at Rs 10 crores only for 1991-92.

Though the Communications Ministry can insist that Alcatel should pass on the latest P 11 E technology to ITI without any extra technology payment, the fact was ITI had no foreign exchange either to buy components for production of E 108 exchanges and other types of telecom equipment. For 1991-92, its foreign exchange requirement has been estimated at Rs 221 crores. But because of the strict import control imposed by the Finance Ministry and the RBI, ITI has been sanctioned just about Rs 8 crores to meet its import requirement of components. New or old technology may, therefore, make little difference to ITI.

IRS-1B Remote Sensing Satellite in Orbit

Launching, Operational Details

91WT0186A Madras *THE HINDU* in English
30 Aug 91 p 9

[Text] Bangalore, 29 August: India's second operational remote sensing satellite, the IRS-1B, was launched today.

The Vostok launcher, carrying the indigenous 990 kg satellite, lifted off from the Baikonur Cosmodrome in the Soviet Union at 12-19 IST. Eleven minutes later, the satellite was injected into orbit and, soon afterwards, signals from it were picked up by the Indian Space Research Organisation's tracking station at Lucknow.

The preliminary orbit determination showed that the satellite had been placed in the planned sun-synchronous orbit, about 900 km above earth. The satellite completes an orbit around the earth every 103.2 minutes.

Though the satellite was launched from the Soviet Union, it is the responsibility of the Spacecraft Control Centre at the ISRO Telemetry, Tracking and Command Network (ISTRAC) based at Peenya, near Bangalore, to coordinate its tracking and to monitor the satellite's health and carry out all manoeuvres and operations required.

Solar Panels Deployed

All systems were working well and procedures to bring the satellite into full operational use were progressing as planned, said official sources. Immediately after injection into orbit, the satellite's solar panels, which had been kept folded for the launch, were deployed. The critical sun acquisition procedures for properly orienting the solar panels towards the sun were completed as planned during the first orbit. The complex earth acquisition manoeuvres for pointing the satellite's cameras and antennae correctly were said to be progressing satisfactorily.

The switching on of the first of IRS-1B's cameras, the LISS-I, scheduled for tomorrow, will be an important milestone, indicating that all is well with the satellite.

When its predecessor, the IRS-1A, was orbited in March 1988, a faulty earth sensor (a device required to keep the satellite correctly oriented) made the switching on of the LISS-I being postponed. After orbit corrections, the higher resolution LISS-II is scheduled to be switched on in 10 days. After finetuning the orbit and exhaustive checks on all satellite systems as well as on the quality of its imageries, IRS-1B is expected to be declared fully operational in 45 days.

Since the IRS-1A which was launched in March 1988 is expected to continue to be operational for another year or so, even though it has completed its design life of three years, the country will be able to use the services provided by both the satellites.

The IRS-1B is said to have cost about Rs. 15 crores. The Soviet Union has charged Rs. 20 crores for launching it and because of India's bilateral agreement with that country, the money could be paid in rupees instead of in foreign exchange.

The launch was witnessed by the Chairman of the Space Commission, Dr. U.R. Rao, the Indian Ambassador to the Soviet Union, Mr. A.S. Gonsalves, several senior ISRO scientists and the Chairman of Glavkosmos (the Soviet Space agency), Dr. Duanev, according to an official release here.

During the initial phase of 15 days when the satellite has to be closely tracked for accurate orbit determination, ISRO will take assistance from ground stations at Bearslake in the Soviet Union, Malindi in Kenya, Weilheim in Germany and Fairbanks in the U.S., in addition to using ISTRAC stations at Lucknow and Bangalore.

Satellite Applications

91WT0186 Madras THE HINDU in English 21 Aug 91 p 18

[Text] After three years of flawless service, India's first operational remote sensing satellite, IRS-1A, will be joined by its replacement, the 1B, which will be lofted into orbit by the Russian Vostok launcher. With 1A coming to the end of its tether IRS-1B will ensure that remote sensing services continue uninterrupted.

Long before 1A was launched, using data from the American Landsat and French SPOT satellites, the Department of Space began developing remote sensing techniques and getting user organisations familiarised with its applications. With the 1A, remote sensing came into common use and the satellite now meets over 80 per cent of the country's needs. About 12,000 products based on IRS imageries are being sold each year. If SPOT imageries were to be used for the same purpose, it would cost the exchequer Rs. 10 crores. In fact, the Department of Space has discontinued using them as it was proving too costly. Landsat is used these days mainly for applications requiring imageries in the thermal band which 1A (and also 1B) lack.

Some of the many applications which 1A's imageries have been used for are:

1. Estimation of crop acreage and yield: Even before harvest, the Government can get estimates of the acreage and production of rice, wheat, sorghum, mulberry and cotton crops. Estimating the area under tea and coffee in hilly regions has been taken up.

2. Monitoring forest wealth: It is possible to maintain a continuous nationwide district and taluk-wise watch on forest cover and its degradation.

3. Drought and flood monitoring: Biweekly district-wise reports on the spread of drought can be put out. Similarly, the area affected by floods and the extent of crop damage can be estimated as also identification of areas at risk and flood control works (like embankments) which need strengthening.

4. Drinking water: The ground water potential of the country has been mapped. These maps have doubled the success rate of drilling bore wells.

5. Mapping for various purposes: There is a nationwide project for land use and land cover mapping. Mapping of saline and alkaline soils, grasslands, wastelands, urban sprawl of various metropolitan areas, glaciers, and of minerals has been carried out.

The 1A was designed for a life span of three years. The condition of its batteries and the amount of fuel left are the major factors which decide this. The batteries must be drawn on when the satellite enters the Earth's shadow and the solar panels cannot be used. The fuel is used by onboard thrusters to maintain the satellite in the right orientation (attitude) and orbit. ISRO scientists believe it can function for another year or so.

The IRS-1B is identical to the 1A, except for one important difference. The gyros will control the satellite's orientation in one more axis. In the 1A, they were used to control only yaw, while pitch and roll were computed using the earth sensor. Gyros, being 'noise' free, are better indicators of the satellite's orientation than the earth sensor. In the 1B, they will control the pitch also, thus, improving the quality of its imageries. In the next generation 1C, gyros will control orientation along all three axes.

So long as the 1A works with 1B, the country will have two remote sensing satellites in orbit and the Indian Space Research Organisation intends putting them to good use. With just one IRS satellite in orbit, if a place is under cloud cover, it can be surveyed again only after 22 days. About a third of the imageries over India are affected by cloud cover. This can be critical if the imageries are to be taken at a particular time. For instance, yield estimation of a crop must be carried out at a fixed period after planting for the most accurate results. It is also important in applications such as estimating the area affected by flash floods.

When both 1A and 1B are in operation, ISRO would like to reduce the interval between scans to 14-15 days, thus improving the chances of getting cloud-free imageries.

The total project cost of IRS-1A and 1B, including that of development and establishing facilities, is Rs. 70 crores. The hardware cost of each satellite is estimated at about Rs. 15 crores. ISRO scientists estimate that it would be 'at least three times as much' if the satellite had been bought abroad instead of being indigenously developed, built and tested.

There will be dramatic improvement in resolution with the next generation IRS-1C satellite scheduled to be launched in two years. The best resolution 1A and 1B can achieve is 36 metres, compared to SPOT's 10 metres. IRS-1C's wholly indigenous cameras and optics are expected to do better than this also.

Improving the resolution is easier said than done, say ISRO scientists, as complexity and size of the spacecraft increase disproportionately. Better resolution requires much larger optics. Advanced electronics are needed to process the signals. The data transmission rates too shoot up (from about 25 Mbps for 1A and 1B to 100 Mbps for the 1C) as do power requirements for transmission. Further, maintenance of the correct orientation too has to be that much better.

The 1C will incorporate several other improvements, including imaging in the middle infra-red band, stereoscopic imaging for terrain mapping, and recording facility to store imageries when the satellite is below the horizon.

Future Launching Plans

91WT0186 Madras *THE HINDU* in English 30 Aug 91 p 9

[Text] New Delhi, 29 August: Announcing the successful launch of an Indian remote sensing satellite from the Baikanour Cosmodrome in the Soviet Union, the Prime Minister, Mr. P.V. Narasimha Rao, informed the Rajya Sabha today that the country would acquire indigenous capability for launching of satellites by next year.

The announcement was greeted with thunderous applause by members on all sides. Replying to clarifications from members on his statement regarding the launch of the second Indian Remote Sensing Satellite, the IRS-1B, the Prime Minister said that by 1992 the Polar Satellite Launching Vehicle (PSLV) at Sriharikota would be ready to launch satellites into orbit.

Mr. Rao said that with the development of indigenous capability India would no longer depend on other countries for launching its satellites. On the other hand, it would join the select comity of nations and could help to other developing countries in launching their satellites.

In reply to questions, Mr. Rao said decoding of the data collected by the IRS would be done within the country using indigenous equipment. On the cost of the IRS, he

said it was more a factor of intelligence and hard work rather than cost. The combined cost sanctioned for both the IRS-1A and 1B worked out to Rs. 102 crores. This included the cost of satellites, their launching and all other facilities. The cost of IRS-1A was Rs. 15 crores and its launching cost Rs. 7 crores. The cost of IRS-1B was Rs. 15 crores and Rs. 22 crores was spent on its launching.

The Prime Minister did not wish to go into the technical aspects of the satellite and said he favoured a debate on the IRS launch. As far as the IRS-1B was concerned, it was not sufficient that it had been launched. "It has to first face the sun and then the earth."

In a similar statement made in both Houses of Parliament, the Prime Minister said that all systems and sub-systems of IRS-1B had been designed and fabricated indigenously. It weighed less than a 1,000 kg. and carried three sets of the state-of-the-art imaging cameras. The Prime Minister said the nation's most experienced hands were controlling the satellite at the ISRO Telemetry, the Tracking and Command Network (ISTRAC) Spacecraft Control Centre at Peenya, Bangalore.

Mr. Narasimha Rao said the centre was connected to other ISRO tracking ground stations at Lucknow and in Mauritius. During the initial phases of the mission, ground stations of foreign space agencies located in the USSR, Kenya, the U.S. and Germany are assisting in monitoring the performance of the satellite.

For a developing country with diverse geological features, remote sensing was critically relevant in providing vital inputs for the management of its vast land and ocean resources. The successful launch of IRS-1B marked India's commitment to use space technology to provide operational services on a continued and assured basis in the vital areas of natural resources management.

The Prime Minister said that it also represented a continuation of India's commitment to use science for peaceful, constructive and development ends which could be translated into areas of tangible benefit of people. "We are determined, with the support of our Parliament and people, not only to preserve the position of India science at the frontiers of professional excellence and international recognition but to make it a vital instrument in fulfilling national needs," he said.

UNI Report:

Mr. Narasimha Rao felicitated the scientists, engineers and supporting staff of ISRO for bringing this 'great success' to the nation. "This reaffirms our pride in being Indian," Mr. Rao said.

As soon as the Prime Minister made the announcement of the successful launch, the members appeared in a festive mood and pressed the Deputy Chairman for adjourning the House early as a "holiday." Mrs. Najma Heptulla gave in and adjourned the House after praising the Indian scientists for the great achievement. The

members also demanded that the Prime Minister distribute sweets at this national success.

It was the fifth launch of an Indian satellite from the Soviet Union. All of them have been successful like the first Aryabhata, launched on 19 March 1975. The other satellites are Bhaskara-I, Bhaskara-II, and IRS-1A.

IRAN

Telephone Link Established With Soviet Nakhichevan

LD1410095691 *Tehran Voice of the Islamic Republic of Iran First Program Network in Persian 1630 GMT 13 Oct 91*

[Text] Telephone links have been established between Iran's Jolfa and the Soviet Republic of Nakhichevan. According to the Central News Unit, Baku state television announced: Thanks to the establishment of this 10-channel telephone link, the inhabitants of the two sides of the border within a 45-km radius can telephone each other directly.

New Satellite Television Station in Karaj

LD2010160291 *Tehran Voice of the Islamic Republic of Iran First Program Network in Persian 1230 GMT 17 Oct 91*

[Summary] The Karaj 1500 W television station in Siyahpishah was commissioned at noon today.

Increase in Satellite Broadcasts Planned

LD2608103291 *Tehran IRIB Television First Program Network in Persian 1630 GMT 26 Aug 91*

[Text] The head of the Islamic Republic of Iran's Voice and Vision organization, in connection with installing satellite ground stations, said that 300 satellite ground stations have been set up and commissioned so far to transmit Voice and Vision programs in the country and that this number will reach 1,750 by the end of the five-year plan. He added that three satellite channels were purchased to broadcast Voice and Vision programs via satellite. Hashemi added that our country is currently facing a cultural war and assault. This is a war of values, and we should confront this plot by immunizing the young and the people and by relying on Islam's rich culture. He said that the Voice and Vision, as a mass media and cultural center, also shoulders this responsibility and is trying to fulfill it.

IRAQ

International Phone Links Said Operating, Open to Public

JN1710094391 *Baghdad INA in Arabic 0915 GMT 17 Oct 91*

[Text] Baghdad, 17 Oct (INA)—The al-Rashid Communications Center today began providing international telephone service to the citizens of Iraq.

Engineer Samir Bashir Khattab, director of the center, told INA that citizens can now contact all countries of the world by way of eight public international telephones installed at the center's new international hall.

The new hall, he said, is larger and has more facilities than the old one, which was destroyed by the planes of the 30-state aggression.

ISRAEL

IBA Signs Agreement on Satellite Broadcasts to USSR

TA0810134691 *Tel Aviv DAVAR in Hebrew 8 Oct 91 p 4*

[Report by Aviva Zalzman]

[Text] The Israel Broadcasting Authority (IBA) and the general company for satellite services yesterday signed an agreement to carry out experimental television broadcasts through a satellite from Israel to Jewish centers in the USSR. The authority will finance the experiment, which will cost \$25,000. The reception and quality of the broadcasts will be examined as well as the general performance.

The agreement on these broadcasts was reached in May 1991 when a IBA delegation visited Moscow and concluded the deal with the director general of the INTER-SPUTNIK satellite company.

The broadcasts from Israel will be received at Jewish community and cultural centers in the Soviet Union through reception antennas.

SAUDI ARABIA

Official Details Maritime Communications

LD1710210291 *Riyadh SPA in English 1928 GMT 17 Oct 91*

[Text] Riyadh, Oct 17, SPA—In order to boost international efforts aiming at providing the highest degrees of safety for ships, which are the backbone of international maritime trade, the kingdom has established broadcasting and reception systems in two coastal stations, in al-Dammam and Jiddah to cover local, gulf and international maritime communications, said the chairman of

the maritime communications center in the eastern province, Mohammad al-Hakran.

In a feature published on page seven of "AL-NADWA" today, the Arabic language Saudi daily interviews Mr. al-Hakran to acquaint its readers with the means of contacting ship captains, commercial and fishing boats.

The equipment used in this system is the latest technology in this field, he said adding that al-Dammam

station [is] similar to the best maritime naval communications stations in the world, as it covers facilitating general correspondence from ships to shore and vice versa, provides phone and telex service, as well as weather forecasts, warnings and S.O.S. calls.

He added that the station provides such free services as medical advice, weather forecasts, warning of storms, warnings of changes in maritime transport maps and provides communication channels with government agencies to help ships in need of official contacts.

Radio Mayak To Compete Against New Commercial Station

LD0510183191 Moscow All-Union Radio Mayak Network in Russian 0430 GMT 4 Oct 91

[Text] Mayak will soon have a competitor. The new daily commercial radio station "Radio 21" is expected to go on the air for the first time next month. The main subjects of its broadcasts will be culture, commerce, and travel. The radio station project has been worked out by MOSCOW NEWS together with three American firms which are supplying the equipment and preparing the musical programs. The station will broadcast on the so-called European band of 103.7 MHz on which not a single radio station is yet operating. This band is only found on imported receivers so you can imagine who will have the opportunity to listen to that radio station. Along with two hours of Russian programs daily, the radio station will broadcast in English for foreigners who are in Moscow. Beginning next year, following the capital, residents of St. Petersburg, Kharkov, Kiev, Alma-Ata, and Minsk will be able to listen to "Radio 21."

Gosteleradio's Yakovlev Holds Talks With RAI Leaders

PM0310155191 Moscow IZVESTIYA in Russian 1 Oct 91 Union Edition p 4

[Report by correspondent M. Ilinskiy "Gosteleradio Seeks Partners in Italy"]

[Text] Rome—"Television, Mass Media, and Organs of Power." That is the subject of countless conferences, "roundtables," symposiums, and meetings being held these days in various Italian cities.

The Italian television market is totally saturated. There are 753 channels operating in the country, including three state channels—RAI 1, RAI 2, and RAI 3—the rest being private firms. Some 1,040 companies have applied to engage in television and radio broadcasting in 1992, and roughly half of them will have their request met.

It is easy to imagine the kind of struggle under way on the "airwaves." Only those companies with the most modern technology, material base, financial support, highly qualified cadres, and extensive domestic and international communications will win the competitive battle. The state company RAI and the private concern Silvio Berlusconi are television giants of that kind in Italy. It is obviously equally easy to realize why Ye.V. Yakovlev, chairman of the Gosteleradio [All-Union Television and Radio Broadcasting Company], is now holding talks in Italy on business cooperation.

"The new radio and new Soviet television," RAI President Enrico Manca said at a news conference after the talks, "can count on aid from Italian state radio and television in the sphere of technology, in vocational training for cadres, in information technology, in access to the market, and in expanding their audience. These plans can be implemented through Italian Government

funding, in particular via the law on relations with East European countries currently under discussion in parliament."

At the press conference E. Manca read out the text of a letter from Foreign Minister Gianni De Michelis saying that the Italian Government will channel some of the funds earmarked for East European countries into implementing RAI's plans for Soviet television.

First Cellular Telephone System Launched

OW0310133691 Moscow Central Television First Program and Orbita Networks in Russian 1900 GMT 17 Sep 91

[Report by V. Batalov from the "Utro" program—recorded]

[Text] While we attempt to use the telephone's rotary dial to contact Moscow without success—not to mention foreign cities—the Mayor of St. Petersburg, Anatoliy Sobchak, in one minute, literally, contacted the Mayor of Seattle, Norman Rice. [video shows Sobchak using a mobile telephone]

The joint enterprise Delta Telecom, which comprises the City Telephone Network, the Technical Control Station, and the American firm U.S. West, has created the first commercial cellular telephone system in Russia. [video shows banks of circuitry, people at personal computers, a "Mobira" brand portable cellular telephone, and people using cellular phones]

It seems that not only we, but also American businessmen, have grown tired of wasting time using the telephone's rotary dial without result. Now, owners of such mobile systems—one can even use them in a car—have the opportunity to contact any city.

True, it is not cheap. It costs 2,000, just for its installation, then add to this a monthly payment of 195, and all of this is in dollars. Only enterprises, SP's [Joint Stock Enterprises], and cooperatives can afford such expenditures. Nevertheless, there is no dearth of those who want one.

Radio Independence Begins Broadcasting in Lvov

LD0810053291 Moscow Radio Moscow World Service in Russian 1330 GMT 6 Oct 91

[Text] Another new station, this time in the Ukraine. Stepan Gerga from Lvov Oblast in the Ukraine writes and I quote: Radio Nezalezhnist, that is to say Radio Independence in translation from Ukrainian, has been broadcasting from Lvov since 18 September of this year. The station is on the air from 1600 to 1700 on frequencies of 936 and 11.825 kHz, and from 1700 to 1800 on a frequency of 11.825 kHz. From 29 September another frequency—5.980 kHz—is due to be added. For the present, Radio Nezalezhnist broadcasts on Wednesdays and Thursdays, but in time it will be daily. Here is the

address of the station: Radio Nezalezhnist, Ulitsa Vattina, 6, Lvov 290 005, the Ukraine.

TASS Chief on Agency's Future Plans

LD0810044991

[Editorial Report] Moscow All-Union Radio Mayak Network in Russian at 1441 GMT on 5 October carries a three-minute recorded interview with Yuriy Vladimirovich Sizov, TASS editor in chief, by correspondent Valeriy Sanfirov.

Asked why TASS now works 24 hours, Sizov explains: "All the world's news agencies work around the clock. TASS should not be an exception to the rule in this respect. The thing is that reports by our foreign correspondents from abroad have always been and still are now transmitted on an around-the-clock basis. As to the information coming in from within the Union, we have decided to report it both throughout this country and abroad on a 24-hour basis as well." He continues: "This will also be assisted by the introduction of the so-called hotline at the Union's internal service. Its telephone number is 202-68-25. Any citizen in our country and any listener abroad who receives our reports can get in touch with us on this telephone number to inform us of the most diverse hot news that may be of interest to everyone. We are and will be ready to encourage these people not only by giving them moral support but also financial. But since TASS is a world agency, every reported fact will have to be verified."

Asked whether TASS intends to rename itself, Sizov says that there are no such intentions because TASS is the name by which the world knows the news agency. It is a trade name, so there is no need to give it any other name. Sizov then goes on to say that the future organization of TASS has not yet been finalized, and various proposals are now being discussed. So it is not clear, for instance, who will finance TASS and how. It could become a joint stock company.

Speaking about long-term plans, Sizov says: "Among our plans for the future there are projects connected with the use of satellite communications. All the republican news agencies may be granted access to TASS channels and its capacities. Thus, signing of agreements will enable them to report throughout the Union by reporting directly without the need to go through our agency's editorial offices. But above all, they will also be able to reach the teleprinters of the world."

Radio Rossii Carries First BBC Program

LD1010090191 Moscow TASS International Service in Russian 0833 GMT 10 Oct 91

[Text] Moscow, 10 Oct (TASS)—At 1000 [0800 GMT] today, a 20-minute BBC program was broadcast by Radio Rossii for the first time.

The programs of the English company will be broadcast, in Russian, to Moscow by a communications satellite,

and synchronously transmitted on shortwave and on the Radio Rossii network. An exchange of journalists and joint preparation of materials is also envisaged by the contract.

Satellite Telephone Connection With Oslo Obtained

AU1010163891 Paris AFP in English 1538 GMT 10 Oct 91

[Text] Stockholm, Oct 10 (AFP) — Lithuania obtained its own telephone satellite connection between Oslo and Vilnius on Thursday [10 October], official sources in Oslo report.

The connection was inaugurated officially by Lithuanian President Vytautas Landsbergis and Norwegian acting Prime Minister Thorvald Stoltenberg. The telephone satellite connection is Lithuania's first direct international connection outside the Soviet Telephone network.

The new communication network, based on satellite communication, is installed separately from the already existing telephone network but still has access to it.

During a visit in Oslo in 1990, President Landsbergis raised the question about Norwegian aid to establish independent communication channels with the West. Lithuania, with its 3.6 million inhabitants, possessed 15 international telephone lines — all going via Moscow — as compared to Norway with 4,000 international lines.

The new system connects the official telephone networks in Lithuania and Norway and can be joined to telefax and data communications.

Radio Rossii Takes Over First Program Transmitters

PM1410090591 Moscow ROSSIYSKAYA GAZETA in Russian First Edition 12 Oct 91 p 4

[Unattributed report under the "News" rubric: "Friction Between the Russian Television and Radio Company and All-Union Radio"]

[Excerpt] By decision of the leadership of the All-Russian State Television and Radio Company, as of 1 October transmitters which used to deliver the radio signal of the first all-Union program began to switch to transmitting Radio Rossii.

"You have to remember that, under a decree of the Russian president signed back in August, all technical news delivery facilities on the republic's territory passed into its ownership," Aleksandr Nekhoroshev, director of news programs for the All-Russian State Television and Radio Company, who is involved in direct talks with the protesting side, explained. "And since there is still such a strained political situation in the country and generally a lack of objective information in the new sovereign states, we decided to take this radical measure so that Russians living outside the republic are able to listen to

Radio Rossii. However, I wish to emphasize that the disappearance from the air of certain broadcasts on the second all-Union program is a temporary phenomenon, and our technical services are now actively eliminating the annoying limitations on their dissemination. We hope that this will only take a few days." [passage omitted]

Satellite Telephone System Inaugurated

*LD1210152691 Vilnius Radio Vilnius Network
in Russian 2130 GMT 10 Oct 91*

[Text] Starting today, there are new telephone communications between Lithuania and the remaining world that do not depend on Moscow's communication officials. We have been waiting for this moment for a long time.

On 10 October direct communication with the Norwegian capital, Oslo, began. Thanks to this international telephone exchange, Lithuania can have telephone communications with virtually the whole world.

The first Vilnius-Oslo telephone link took place between Supreme Council Chairman Landsbergis—he conversed from his office with Norwegian Foreign Minister Stoltenberg, who is also current acting prime minister. The head of the Lithuanian parliament expressed his satisfaction at the opportunity to have communications with the countries of the world. He thanked the Norwegian firms for their help in equipping the satellite communications system, which is of a high technical standard.

By the way, the Norwegian Government has allocated 1.5 million crowns for the satellite communication equipment. Another half million crowns was spent later. Workers from eight Lithuanian communication enterprises have taken part in the planning, construction, assembly, and arrangement of the system.

Deputy Communications Minister Romanas Mankevicius said that we had received the first system to communicate with other countries bypassing Moscow. Now Lithuania's residents will be able to phone people in other countries with the help of this system. An office with precise facsimile communications is being organized in Vilnius.

Frequencies of New Radio Station Given

*LD1110193891 Tallinn Estonian Radio in English
2130 GMT 7 Oct 91*

[Excerpt] A new local station, Radio Tartu has been started in Southern Estonia. Presently they are running broadcasts from 4am to 11pm UTC on 69.62 MHz in the so-called Eastern FM area. They are planning to increase their power, but now they have only one low-power transmitter meant to serve the local region. Still, one ought to give it a try. We shall give the address and more information about the station in our next program.

Eesti Raadio has also introduced some new medium-wave transmitters. On 810 kHz the second domestic program is broadcast from Haapsalu, Western Estonia. 1602 kHz is the frequency for the Viljandi transmitter, which is situated in Southern Estonia. Both have one kilowatt of power. The Haapsalu transmitter will probably make listening to Voru local radio on the same frequency more difficult.

Radio (?Ala) is a new station on 1540 kHz playing Russian (?bard songs) 24 hours a day. Unfortunately there is no more information available. [passage omitted]

Independent Telephone Link With Oslo Established

*LD1110131491 Vilnius Radio Vilnius Network
in Lithuanian 2100 GMT 10 Oct 91*

[Text] From 1121 today a direct line of communication was opened with the Norwegian capital, Oslo. Now Lithuania will be able to communicate with the outside world through an international telephone exchange in that city. We will no longer depend on Moscow's communication workers.

Commercial Radio UKV-Ekspress Broadcasts in Astrakhan

*LD0810054991 Moscow Radio Moscow World Service
in Russian 1330 GMT 6 Oct 91*

[Excerpts] Radio UKV-Ekspress is a commercial news and entertainment station located in the town of Astrakhan on the lower Volga.

Radio UKV-Ekspress operates every day, several times a day, on VHF-FM only on a frequency of 69.9 MHz. [passage omitted]

The founders of the station are the small enterprises of the Volga and the Rus-svyaz-inform state communications and information technology enterprise.

The station's address is: Ulitsa Pobedy, 53, Astrakhan, Soviet Union. Unfortunately the post code is not given. The telephone number in Astrakhan is 5-26-64.

Radio Ala Frequencies, Times Announced

*LD0810100591 Moscow Radio Moscow World Service
in Russian 1330 GMT 6 Oct 91*

[Text] Today we begin in Moscow. A new independent music station, Radio Ala [announcer spells name] has begun work here. The station broadcasts news and songs by the bards. It is on the air virtually round the clock according to the following timetable: 0730-1600 on 1386 and 684 khz in the medium waveband and in parallel on 7400 khz in the short waveband; 1630-0700 on 5040 khz; 0700-1200 on 11,925 khz; 1200-1500 on 11,920 khz; and 1530-0700 on 6055 khz. Some frequencies will be changed in November. The transmitters are located as

follows: transmitters working on 684, 5040, and 7400 kHz are situated in St. Petersburg. All the rest are in Kaliningrad in the west of our country.

Radio Station Ala has plans to bring in relay stations in Yekaterinburg and Novosibirsk in the very near future which will enable residents of Siberia and the Far East to receive the station's programs reliably.

As I have already said, Radio Ala is an absolutely new station. It went on the air for the first time at 2200 world time on 1 October. The station doesn't yet have either sufficient staff or the necessary forms and material so it will not yet be confirming reception reports or replying to letters. For this reason the head of the radio station has asked me not to give their address yet. I know it—but I'm not going to give it. Radio Ala will itself give all the details on the air in the very near future.

Firm Develops New Information Network

*LD2010214291 Riga Radio Riga Network in Latvian
0530 GMT 17 Oct 91*

[Excerpt] An information network has been set up in Latvia: Riga-Tallinn-Helsinki. Correspondent (Inese Magusonoka) met (Agasijis Pakuls), director of the Latvian Data Package Commutation Network [Latvijas Datu Paketu Komutācijas Tīkls] company, on this network's activity:

[Begin recording] [(Pakuls)] The information network, in contrast to the communications networks familiar to us hitherto, is a little stranger. If on the telephone network we can, in practice, only talk.... [changes thought] Well, we can also (?send off) FAX messages, but that we can only do in one direction. We have a telex network, a (?datex) network, where we (?send off) messages, but that too works in one direction. This network is different. This is a dialogue network, where a personal computer—or what they now call a dator—is connected to a subscriber's system. At one end, there might also be a big computing machine, which has a big data bank, a fund of information. From our personal computers, we can get into the information network to get any information. At the moment, we can work, in practice, with any data bank in the world. We have the possibility of getting into networks all over Europe, the United States, and other continents of the world.

[(Magusonoka)] All continents?

[(Pakuls)] Today, not yet all continents, but in the near future all of them. That depends on how we develop our work, what sort of subscriber demand there is, because, of course, we have to pay for work on the world's networks. If we don't have subscribers, we can't do it either. What sort of features does the network have? When we work in dialogue with information sources, for example, we can connect with the Paris data transmissions to have a look at what cars are being sold there today, to look at their prices, makes. After that, it poses us a compulsory question: Which do you want to choose?

In this case, I say: Unfortunately, you don't have a car of the make I need. He says: We're sorry, come back tomorrow. I can get into the Swedish network, for example, and have a look at what the weather in Riga is like. There, they give more extensive weather reports than what we can hear in Riga on Radio Riga, unfortunately. [passage omitted] [end recording]

DX Feature Lists Transmitters 'In and Around' Lithuania

*LD1910110991 Vilnius Radio Vilnius in English
0000 GMT 15 Oct 91*

[From the "DX Program"]

[Excerpt] Here are the details of powerful TV transmitters in and around Lithuania. There is the powerful TV transmitter in Minsk on channel R1, with video in 49.75 MHz and audio on 56.25 MHz. The video power is about 200 kilowatts and the audio power is about 60 kilowatts. The transmitter carries Central television from Moscow most of the day, with the exception of local night hours.

Another, less powerful, transmitter on the same channel is located in the Latvian town of Kuldiga, 130 km right west of Riga. Its vision Effective Radiated Power (ERP) is about 35 kilowatts, but the sound ERP is rather too little, only 3.5 kilowatts.

Now on to the channel R2, with a vision frequency 59.25 MHz and a sound frequency 65.7 MHz. Here you can find a transmitter in Vilnius carrying the same Central Television from Moscow. The vision ERP is 177 kilowatts and the sound ERP is 60 kilowatts. The transmitter is on the air for most of the day, as in the previous case.

Channel R3, with a vision frequency 77.25 MHz and a sound frequency 82.75 MHz. There are no powerful transmitters on this channel in Lithuania, but in neighboring Latvia you can find a transmitter of the Latvian Television in Riga. It has the vision and sound ERP's of 200 and 20 kilowatts, respectively.

In Belorussia there are two less powerful transmitters in Minsk and Grodno, the latter being situated close to the Lithuanian and Polish borders. The first transmitter carries the Second Central Television Program from Moscow, the second one carries its First Program. Unfortunately I don't know the exact powers, but they seem to be about 30 kilowatts vision and thirty kilowatts sound ERP.

On the channel R4, 85.25 MHz vision and 91.75 MHz sound, you can find the Lithuanian Television transmitter in Vilnius. The ERP's are 177 kilowatts vision and 60 kilowatts sound. The transmitter is on the air from 0545 to about 0900 UTC in the morning, and from 1500 to about 2200 in the evening, but the program operates uninterruptedly from 0700 to about 2200.

And finally to channel R5, with a vision frequency 99.25 MHz and a sound frequency 99.75 MHz. It carries the

transmitter with 100 kilowatts and 10 kilowatts vision ERP's is located in Suwalki, Poland, close to the Lithuanian border. It broadcasts the First Polish Television Program. Another transmitter, with about 35 and seven kilowatts respectively, is situated in (?Sutvene), Latvia, some 135 km right east of the Latvian capital Riga. It relays the First Program of the Central Television from Moscow. [passage omitted]

Russian Radio Official Discusses Program Allocations

*LD1710111691 Moscow Radio Rossti Network
in Russian 0400 GMT 17 Oct 91*

[Text] Over the last several days articles have appeared in PRAVDA, MOSKOVSKIY KOMSOMOLET, and certain other publications accusing the All-Russian Radio-TV Company of usurping the ether, grabbing transmitters, etc. We asked the company's technical director, Stanislav Gunevich, to comment on the situation:

[Begin recording] It is amazing that a purely technical matter like redistributing the radio broadcasting network across the territory of Russia should acquire such political coloring and arouse the passions which are raging at All-Union radio and TV and in the press. They have all rallied to the defense of "Yunost," as if someone had attempted to kill it, but the problem is extremely simple: in accordance with the accord between the presidents of the Union and of Russia, the All-Russian Radio-TV Company has embarked on a reallocation of the radio program distribution network, since, according to this decision, Russia's Radio has at last gained a channel of its own, and, accordingly, the right to a network to distribute it. Moreover, agreement on a reallocation scheme was reached with both ministries of communications, the republican and the Union ones, and, naturally, with the All-Union Radio-TV Company.

Before the putsch, Russia's Radio had a total of five hours, as part of the Second Program on All-Union Radio. At that time, All-Union Radio had six programs on the air: the First Program, Mayak around the clock, the Second Program, where we had only five hours, the Orpheus channel, and the joint programs of Europa-Plus and Nostalgic Moscow, making a total of more than 80 hours a day, as against our five hours. Meanwhile, other republics had as many as two full-fledged radio programmes.

For the sake of information, distribution of these programs, which are produced in Moscow, is implemented using special radio relay landlines and satellite communications channels, to reach specified populated areas. The channels arrive like blood circulating. Then these programs go to transmitters, on medium wave, long wave, short wave and VHF.

The entire network for the distribution of radio programs is especially calculated to take into account the

allocation of frequencies, population density, geographical features and, of course, guaranteed audibility. A new scheme for distributing programs was organized within the framework of the existing network, taking into account the introduction of the new 24-hour programming of Russia's Radio.

Of course, there should have been a campaign to inform radio listeners about the forthcoming reshuffles, and then there would probably not have been such surprises. Changes to the scheme that listeners are used to, just like changes to bus routes or train schedules, always bring certain inconveniences. This reshuffle has exposed the shortcomings of our preliminary technical work. This has particularly affected several republics in the European part of the country. They have virtually become unable to hear Russia's Radio, and we have uncovered great interest in our programs there.

The following changes have taken place in our coverage area, with the redistribution of the network brought about by the introduction of the new programming: the First and Second Programs and Mayak used to have a coverage area of 95 percent, and Orpheus had up to 30 percent. Following the reshuffle, Russia's Radio and Mayak took the lead, with a coverage area of 95 percent, while the First Program dropped to 75 percent, and the Second Program, which suffered the most, went down to 45 percent. True, following certain adjustments due to the wishes of republics to have Russia's Radio, the coverage area of the Second Program has fallen to 30 percent.

We are trying to improve the distribution scheme, by ordering new communications channels and through a more rational allocation of transmitters. We are helped very much in this by listeners' letters.

I find the talk of job losses for workers at All-Union Radio incomprehensible, because Radio Russia has departed from the Second Program of All-Union Radio and, so journalists are needed.

All-Union Radio now operates six programs, while we have just one. Air time has changed like this: All-Union Radio used to be on the air for 83 hours, and we for five. Now, All-Union Radio is on the air for 65 hours, and we for 25. I can't see why, with 65 hours of broadcasting, they can't find a place for the "Yunost" program that is so popular among young people. They just have to do some work and, probably, squeeze out features that are not very interesting. Obviously, it is the people who make uninteresting programs that will end up without a job here.

I think listeners will get used to the new positions of their favourite programs on the dial within a few days. We will be busy with the further development of the radio program distribution network, since listeners beyond the Urals and in the Far East have been shortchanged, and don't as yet have sufficient choice, as we do in Moscow and the European part of the republic. [end recording]

Work on Drafting Radio, Television Law Ceases

LD1410104991 Moscow Radio Rossii Network
in Russian 2200 GMT 13 Oct 91

[Excerpt] Work on the USSR bill on television and broadcasting in the USSR has in fact ceased and is unlikely to resume in the near future. This was stated in an interview with a Radio Rossii correspondent by USSR Deputy Anatoliy Yezhelev, chairman of the St. Petersburg Union of Journalists and head of the group drafting this bill, Denis Gurinskiy reports.

[Gurinskiy] According to Yezhelev, drafting of the bill was discontinued soon after consultations with the heads of the republican television and radio structures, during which the group of union parliament deputies came up against their unwillingness to assist the emergence of a union law on television and radio. Anatoliy Yezhelev described the position of these leaders as—I quote—wholly pragmatic in the context of the disintegration of the USSR and the republics' strivings independently to issue laws on their own television and radio broadcasting. Deputy Yezhelev described the work of the group he heads as being absolutely pointless. He intends to brief the USSR Supreme Soviet Presidium soon on the need to abolish this group until such time as the Union treaty is signed, and then to resolve the question of the expediency of drawing up such a bill at the union level.

Commenting on today's situation in the sphere of the homeland's television and radio broadcasting, Deputy Yezhelev noted the state of chaos and degradation of administrative-technical services which prevails in everything. Meanwhile Yezhelev predicts the onset of stabilization in television and radio departments, but only in the event of their activity being given legal concrete expression within the framework of the new Union treaty. [passage omitted]

Second Channel Used To Beam Russian TV to Uzbekistan

PM1610100391 Moscow IZVESTIYA in Russian
15 Oct 91 Union Edition p 2

[Andrey Orlov report under the "Direct Line" rubric: "Uzbekistan Watches Russian TV Programs"]

[Text] Tashkent—Inhabitants of Uzbekistan, who were hitherto denied the opportunity to watch Russian TV programs, are now able to do so.

The closed second television channel from Moscow has begun to operate again. The "Vesti" news program is on Tashkent viewers' screens as well as other programs. Following an appeal from a number of Uzbek Supreme Soviet deputies and viewers, the leadership of the Uzbek State Committee for Television and Radio Broadcasting deemed it possible to network this channel. The financial problems that were a stumbling block are being resolved. The intention is also to relay programs from Central Asian and Kazakh studios on the second program.

More on Radio Rossii Linkup With BBC

PM1610102191 Moscow PRAVDA in Russian 14 Oct 91
p 4

[Unattributed correspondent report: "Once We Jammed, Now We're Boosting Their Broadcasts"]

[Text] London—The BBC Russian Service has concluded an agreement with Radio Rossii: Two half-hour news programs from the British corporation will be broadcast on Russian radio wavelengths every weekend from next year. Moreover, Radio Rossii's wavelengths will be given over to a program on topics unrelated to politics once a week.

John Tusa, managing director of the BBC World Service, who signed the agreement together with Oleg Poptsov, chairman of the All-Russian Television and Radio Company, said: "This is the first deal of its kind concluded between a Western and Russian radio station. It is surprising that less than five years have passed since the USSR stopped jamming the BBC. The agreement marks a great success for us in winning air time on domestic radio frequencies."

It would be logical, of course, to expect the BBC to "allow" certain Radio Rossii programs on British airwaves in exchange for this goodwill gesture. This has not happened so far. It has been decided only to invite a Radio Rossii journalist for a six-month training stint in London. Things will become clearer as time goes on, as people say.

Telephone Link With Norway Begins Operations

OW0310020991 Moscow BALTFAX in English
1530 GMT 2 Oct 91

[Following item transmitted via KYODO]

[Text] The newspaper "Liietuvos Ritas" reports that a telephone line via satellite between Lithuania and Norway began operating on October 2. The line will include six vocal channels, one computer channel and one fax channel.

Lithuania Wants To Join European Satellite TV System

OW1710215091 Moscow BALTFAX in English
1630 GMT 17 Oct 91

[Following item transmitted via KYODO]

[Text] Lithuania is the first Baltic state to express readiness to join the European satellite TV and communication system EUTELSAT.

EUTELSAT satellites make it possible to receive TV programs of European countries in Lithuania already now. In fact, if Lithuania enters that system it will be able to participate in EUTELSAT's commercial activities.

EUTELSAT system includes six satellites.

REGIONAL AFFAIRS

Proposed Compromise for EC HDTV Standard Criticized

91MI0499X Duesseldorf *HANDELSBLATT* in German
30-31 Aug 91 p 15

[Text] The two European Community Commissioners, Filippo Pandolfi from Italy and Jean Dondelinger from Luxembourg, with Federal Post Minister Christian Schwarz-Schilling, have attempted to reach a new compromise in Berlin with the industry and suppliers of TV programs over the disputed MAC guideline.

The new draft of a proposed MAC guideline to cover the introduction of the new D2-MAC TV standard meets the needs of program suppliers and satellite operators in two respects. TV programs first transmitted by satellite after 1 January 1992 do not have to be transmitted entirely in D2-MAC. From the start of 1992 until the end of 1993, these programs may also be transmitted in Pal [Phase Alternation Line], provided there is a simultaneous D2-MAC transmission.

Also, according to the new proposal, existing TV services may be transmitted in the Pal standard for an unlimited period; from 1994, however, these program suppliers will be obliged to provide parallel transmissions in D2-MAC. After 1 January 1993 manufacturers of TV receivers will be obliged to equip equipment capable of receiving satellite and cable transmissions (the majority of the TV receiver market) with D2-MAC decoders.

To encourage both industry and program suppliers to cooperate, simulcast transmission will receive a sweetener in the form of a financial injection of between 500 million and 1 billion European currency units [ECU]. The final decision on the MAC directive will be taken by the Council of Ministers by the end of 1991, Dondelinger announced, with further discussion among those involved continuing during the coming months.

Public and private providers have however rejected even the new proposal. They continue to view any EC guideline as an authoritarian, legally inadmissible, and consumer-unfriendly interference in what has hitherto been a free market for satellite reception in Europe. In this connection, Schwarz-Schilling has however warned against proceeding along a legislative path in the discussion over MAC.

RACE Director on Communications Program

91AN0532X Brussels *XIII MAGAZINE* in French
Jul 91 pp 6-8

[Article by Roland Hueber, director of the EC's RACE program: "RACE: The 1995 Goal"]

[Excerpts] Since the mid-1980's, the Research and Development in Advanced Communications Technology in Europe (RACE) program has become a synonym for Europe's efforts to develop and implement integrated broadband communications (IBC) in Europe.

The question that immediately comes to mind is: Why is the European Community, and more specifically the Commission, involved in these matters at all? IBC is, after all, a technologist's term. It is not even a fully defined technology yet; it is rather a generic concept which covers still unclear choices between various possible technical solutions for an integrated digital telecommunications system. Many companies, official bodies, and working parties are involved in the exploration and definition of this concept, in Europe and elsewhere. But while the Commission has no single policy on technology, it has always stood in favor of network innovation and harmonization of standards among member states.

The basic justification for EC action is the need to promote the development of Europe's infrastructure. But there is a long-term commitment to a strategic goal. This goal is the single European market, with the free movement of goods, services, and people throughout the Community. Free and open communication access, provided by telecommunications infrastructure, is an essential adjunct to this. A key contributor to this aim is the RACE program, which gives support to a wide variety of telecommunications projects and provides a permanent forum for the exchange of research findings. [passage omitted]

Since the objective of RACE was first defined, a much clearer appreciation of its implications has emerged, particularly:

- The heavy drain on cash resources necessary to finance the construction of the new infrastructure;
- The natural reluctance among telecommunications operators to make big investments before a clear demand for new services has developed;
- The impact of present or future deregulation affecting the investment risks as seen by established operators;
- The differences in national market conditions, leading to a phasing in the timing of introduction of IBC throughout Europe.

This is taking place against a background of important changes in the economic structure of industry as a whole:

- The increasing capital intensity of network operation;
- Rapidly decreasing transmission costs, after the introduction of high-capacity fiber links;
- The change in telecommunications equipment markets, away from switching and toward transmission, network management, and customer premises equipment.

A very important consideration is that many of the pioneer users of broadband will be found among larger companies. It is among the major corporations that one

finds the telecommunications expertise and financial resources necessary to exploit an innovative technology. But by definition such large companies operate on at least a European, and often a world-wide scale. Therefore, strictly national initiatives and policies toward broadband communications will not be good enough.

All these factors mean that there is a clear need for a robust multinational implementation strategy which will evolve with the market well into the next century, and which will be based on a strategy developed jointly and agreed to between network operators, industry, and users. The major milestones of such a strategy are expected to be as follows.

In the first phase, roughly from now to 1993, one can expect the introduction of early applications, mostly in the business and professional field, and of advanced communications experiments to test emerging new services. They will be based on existing networks and possibly also on early versions of broadband-ISDN equipment, for example metropolitan area networks (MANs) and the first asynchronous transfer mode (ATM) prototypes. At this point also the major investment and procurement decisions will be made. This requires the completion of the related major standards at this time.

This will subsequently progress to the linking up of all the capitals of the Community and some neighboring countries, based on existing or presently planned fiber-optic trunk networks, supporting all kinds of voice, data, and image traffic. This may be either in a separated or an integrated mode.

Thus, by 1995 the initial IBC implementation and completion of customer access for businesses in major centers of economic activity throughout the Community can be expected. At this point also, field trials to test a representative range of broadband services, including residential customers, with two-way video and possibly digital HDTV using commercially available broadband equipment, could be foreseen.

The middle of this decade will be the critical period. By 1996-97, the offer to business locations in towns of more than half a million inhabitants of a range of basic broadband services, allowing fast inter-LAN [local area network] data transmission, desktop video conferencing, and sophisticated CAD-CAM [computer-aided design and manufacturing] facilities, is likely to become reality. At the same time, widespread fiber-to-the-home deployment carrying a full range of services to the residential customer is due to start.

Depending on local conditions, existing and planned broadband islands will progressively link up via long-distance optical fiber networks, offering increasingly universal access to services. In the long term, a 50-percent penetration of Community-wide broadband access availability is targeted for the years 2005-2010.

This scenario demands broadly-based collaboration in three areas:

- Network strategies and planning for IBC implementation;
- Development of the technologies necessary for IBC;
- Functional integration, including the carrying out of application pilot projects.

The structure of the RACE program has been designed to cover work in these three areas.

Pilot applications are real-world tests of prototype communications applications which, when fully developed, will require the use of or will benefit from the introduction of IBC. That is, they have a potential or direct need for high bit-rate transmission, large data volumes, or complex multimedia interaction which only the advent of IBC would make economic. These pilot projects are being run in manufacturing industry, finance, transportation, health care, media and publishing, and other key industry sectors.

All of the individual pilot applications share the same general objectives. These are:

- To confirm the results of initial analyses of market segmentations and needs;
- To advance the understanding of the characteristics of user needs by gathering real-world experience;
- To provide feedback on applications and thus on service and system specifications;
- To provide an input to the industry sector's standardization process, paving the way for the widespread adoption of the applications by the users.

It is a very important strategic goal to try to reduce uncertainty for manufacturers and network operators in equipment and service design, and to improve business' and industry's understanding of IBC's potential. This is because the cost of developing and offering integrated broadband communications in Europe is evidently considerable. Telecommunications administrations will be reluctant to make this investment unless a clear user demand can be shown. But the majority of users will not be aware of what can be done with broadband services until they are offered and can be tried in action. Accordingly, there is a certain danger of vicious circle, where lack of supply leads to lack of demand which in turn seems to justify the lack of supply.

The role of RACE and especially the pilot applications is to help break out of this vicious circle. By showing that there is a demand, and by realizing it in an actual functioning application, the program hopes to promote a procedure where increasing demand will produce economies of scale which in turn produce lower prices, which reinforce demand, and so on.

The Community's current Framework Program for Research and Technological Development will expire in 1991. A new, third framework program was approved in

April 1990, covering the years 1990-1994. Specific programs within this third framework program are currently going through the necessary approval procedures, and they include one which is devoted to advanced communications technologies.

The Commission's proposal for this specific program identifies eight areas of future action:

- IBC research and development;
- Intelligence in networks/flexible communications resource management;
- Mobile and personal communications;
- Image and data communications;
- Service engineering technologies;
- Information security technologies;
- Advanced communications experiments;
- Test infrastructures and interworking (horizontal R&D area supporting the other priority areas).

To carry out future projects in these areas, 484 million European currency units [ECU] has been earmarked by the Community.

At the strategic level, the emphasis of future action is likely to shift from the previous phase of "exploring options" to a more concrete phase of "preparing for implementation." It may also become necessary to fine-tune the role of public involvement as implementation approaches and competitive and market forces gain importance.

To summarize, RACE is not technology in a vacuum. It is a planned program of research and development, managed in a businesslike way, with the objective of producing the right technology at the right time at the right price for well-specified applications. The overriding goal is in the end to provide the user with a greater variety of telecommunications services, of a better quality and at a lower cost, giving Europe the full internal and external benefit of a strong telecommunications sector.

European HDTV Standard Still Debated

91MI0481X Bonn DIE WELT in German 29 Aug 91
p 10

[Article by Heinz Stuwe: "Television Standard on the Test Bench"]

[Text] Federal Minister of Posts, Christian Schwarz-Schilling (CDU [Christian Democratic Union]), is continuing to fight for the D2-Mac television standard, said to give subscribers a trouble-free transition to HDTV [high-definition television] in the future. He will be meeting the two EC Commissioners Filippo Maria Pandolfi and Jean Dondelinger today on the fringe of a Broadcasting Exhibition. Also present will be representatives of broadcasting corporations, Telekom, and the entertainment electronics industry. D2-Mac has more than once been given up for dead. Of course, programs have long been transmitted in D2-Mac (by the French

TDF satellite and Telekom's TV-Sat), so that better picture quality and multi-channel sound of CD quality would really be possible even now, but reasonably priced receivers are not available. Neither manufacturers nor broadcasting corporations have seen any reason to grasp the marketing initiative for D2-Mac.

Schwarz-Schilling achieved an initial success last September: Broadcasting corporations, industry, Telekom, and the ministers signed a memorandum of understanding on the television standard, in which ARD [Association of German Public Broadcasting Companies] and ZDF [Second German Television Channel] undertook to broadcast a proportion of their programs in the new 16x9 wide-screen format of the Broadcasting Exhibition onwards. Sat 1 and RTL [Radio-Television Luxembourg]-Plus intend to follow. The cinema experience in the living room, which only becomes possible with D2-Mac, is expected to create the market for 16x9 television sets. The manufacturers promised to present sets of this type at the Exhibition. "The undertakings are being maintained," says Peter Kahl, head of the Federal Ministry of Posts department concerned. "The more quickly we get the new format, the earlier the innovation cycle will get under way."

Schwarz-Schilling has failed to achieve one objective: He wanted to put through a change regarding the federal laender in the state Broadcasting Agreement committing ARD and ZDF to broadcasting their main channels in D2-Mac via TV-Sat. Thus far they are only represented by their less attractive satellite channels, Eins-Plus and 3Sat. "Copyright problems could stand in the way of an amendment," says Kahl. The public broadcasting corporations are reluctant to back a TV standard that can only be used via satellite (or fed into cable networks). They favor the further development of the PAL [phase alternation line] system into PAL-Plus, with which, by the mid-nineties, programs in the new picture format, using normal antennas will be receivable from earthbound transmitters as well. The private corporations have no time for programs that virtually nobody can see. Both fear the high costs of the technical changeover from the conventional 4 x 3 format to 16 x 9.

Is D2-Mac thus to be denied its breakthrough? For the European electronics entertainment industry, the issue is not merely a technical standard: The European market is at stake. The Japanese competition is steering straight for HDTV with its own standard. The EC Commission intends to use its power to keep the EC manufacturers on course. At the end of June it adopted a draft directive designed to impose D2-Mac that was so radical that it took even the industry by surprise.

In the view of the Federation of Consumer Associations (AgV), the consumer's right to self-determination in purchasing decisions will be endangered if the directive is passed in its present form because it would make the D2-Mac decoder compulsory for all TV receivers with a screen diagonal exceeding 55 cm purchased from 1993 onwards. Representatives of industry regard it as more

reasonable to stipulate D2-Mac equipment only for sets with a satellite receiver. The AgV is calling upon the Federal Government to take action in Brussels to avoid subscribers and taxpayers being burdened with unnecessary costs: A billion German marks [DM] in EC subsidies to the industry, broadcasting corporations, satellite and cable network operators would not be acceptable.

Aid for industry aimed at creating reception potential for the new TV standard are being justified by the Ministry of Posts. Kahl stresses however that the draft directive requires amendment. The obligation for new satellite channels to broadcast solely programs in D2-Mac from the beginning of 1992 "would be the death of any new corporation." After all, the number of households with D2-Mac TV receivers in 16x9 format, which will cost DM8,000 to 9,000 will still be small in 1992. This is why the corporations must be allowed to broadcast in the conventional PAL standard, in parallel with D2-Mac.

Brussels is thinking in the same direction, as has been informally indicated to the Ministry of Posts. Brussels is also ready to compromise over deadlines for receivers. Commissioner Filippo Maria Pandolfi will give Minister Schwarz-Schilling details at the Broadcasting Exhibition.

Availability of HDTV to Consumers Questioned

91WS0547X Duesseldorf VDI NACHRICHTEN
in German 30 Aug 91 p 4

[Article by R. Boensch: "HDTV Strategists Wander in the Standards Jungle"]

[Text] Duesseldorf, 30 Aug—Colorful and sparkling is the way the International Radio and Television Show presents itself every two years in Berlin. When the doors of the Radio and Television Tower open this week, the variety of media will allow the visitor to submerge himself in standards, shapes and equipment. But one thing is becoming clear even to a layman: The age of wide-screen television has dawned.

The compact screens of TV equipment in the 4:3 format are blown up to Cinemascope format. The magic marketing formula for the boob tubes in the exhibition halls is called "16:9." And they have all arrived in the new capital with their brand new products: Nokia, Philips, Thomson and Grundig, all are showing 16:9 equipment. There is great interest in buying, stated the Finnish company, even last week. And this format is also useful for the consumers, according to Nokia, since many movies on cable and satellite television are transmitted in wide-screen format.

On the side, there were some fine points to make life sweeter for industry observers. Thus, the first Philips sets were still equipped with tubes from Thomson, while German Grundig was based on Philips tubes from the outset. But consumers do not notice any of that. Instead, they are much more interested in the cost, at present still around 9,000 German marks [DM], of the television set which weighs approximately 70 kilos.

To the member of the executive board of Grundig, Cees van der Wiel, the success of the 16:9 equipment will depend largely on two factors: "First, a decisive criterion will be how fast the picture tube prices adapt to the price level of the present 4:3 tubes and, second, whether the transmission institutions will offer the consumers a wide range of 16:9 broadcasts as soon as possible."

The first seems to become reality fairly soon, because the big players in the industry are already announcing smaller equipment at prices around DM 3,500. This is also the way the Society For Entertainment and Communications Electronics (GFU) stated the industry's position: "The 16:9 screen, originally just a feature of the planned high-definition television, will now benefit all television viewers."

The format, once planned as a fixed component of the future high-definition television, has thus become independent at a premature stage. Years before actual commercial broadcasts in HDTV—they will start no sooner than 1995—the wide-format equipment is becoming a prestige object for FRG living rooms. On the presumption that the consumers take high prices and a lack of program content into account.

At the radio and television show, television viewers can already see what awaits them in the next few years on their screens. This is where the official starting shot for the transmission of a European transitional standard for the ultimate HDTV, D2-Mac, will be fired. RTL Plus, SAT 1, 3Sat and EinsPlus transmit their programs from TV-Sat in D2-Mac.

High-definition signals which are also being generated at the fairgrounds in Berlin permit a glimpse of the distant future. Primarily the newest HDTV productions are being played, but live productions are also planned. The prerequisite for this is that technically skilled HDTV specialists from the transmission institutions, who were actually only going to be used during the Olympic winter games in Albertville, are on hand in the transmission trailer, for example.

Berlin shows programs for which the television viewer will still have to wait a long time. Because although the television world will present a harmonious appearance over the next few days, in the background there is trench warfare. The clearer the structures of the introductions strategy of HDTV become, the more violently the European development comes under criticism.

"Two fronts have formed," notes television director Hans-Joachim Herbst laconically. "On the one hand are the technicians, who are excited about the new norms, and on the other side the programming people, who say no to HDTV." Only a few of them recognize the need for HDTV, which entails considerable costs on the part of the program producers.

A directive from the EC Commission is creating additional turbulence at this time. At the suggestion of some European companies in the entertainment industry, a

guideline was developed in Brussels to introduce the transitional norm D2-Mac, which even goes a bit too far for the producers.

Mainly one clause seems paradoxical to the industry, according to which they have to furnish all equipment over a certain size with a D2-Mac decoder. But there is no talk about a necessary satellite tuner, without which reception of D2-Mac—except for cable households—is not possible.

And so commission member Schwarz-Schilling must make his tour of the show in the anticipation of criticism. "We will speak to the Minister of the Post Office once more at the Radio and Television Show," says the Central Association for the Electrical and Electronics Industry. "You cannot direct things from the green table in Brussels; in the final analysis, the market will decide," lectures Manfred Dannemeyer, managing director of the National HDTV platform in Germany.

The Luxembourg satellite operating association SES, known from its Astra satellites, goes even further. After all, the D2-Mac norm as an intermediate solution for high-definition television only serves to "bleed the customer." And the Luxembourgers are not alone in their harsh criticism of the Mac standard. Many people from the ranks of program suppliers and consumers increasingly recognize that the "evolutionary" road for Europe to high-definition television is not all that "evolutionary." Each jump from one norm to another requires additional decoders in order to be able to receive the signals and new sets—will the viewer really be getting a huge step up in quality along with the step up in standard?

CYPRUS

Relay Transmitters for Greek TV Begin Operations

NC1110203291 Nicosia Cyprus Broadcasting Corporation Radio Network in Greek 1130 GMT 11 Oct 91

[Text] The Cyprus Broadcasting Corporation announces that the transmitter for relaying the Greek Television One [ET-1] channel was put into operation yesterday at the Dhrousha substation. The transmitter broadcasts on Channel 52 and covers the Polis area.

Transmitters for relaying ET-1 have also been put into operation at the Phterykoudhi and Palekchori stations, broadcasting on channels 55 and 32, respectively.

House Ratifies European Convention on Television

NC1010113091 Nicosia CYPRUS MAIL in English 10 Oct 91 p 3

[Excerpt] The ratification of the European Convention on Transfrontier Television, the extension of a government guarantee to the Cyprus Electricity Authority, and

a couple of supplementary budget bills took up most of the time during yesterday's plenary session of the House of Representatives.

Unusual for a plenum, the session took place on a Wednesday so as to allow the ratification of the Convention in time for today's signing ceremony in the course of the European Ministerial Conference on Mass Media Policy held in Nicosia.

Aimed at consolidating the free flow of information and ideas the ECTT, now signed by nineteen countries, was first enacted in Strasbourg in May 1989. The Cypriot Government joined the Convention last April. [passage omitted]

Minister Signs Convention on Transfrontier Television

NC1110082591 Nicosia Cyprus Broadcasting Corporation Radio Network in Greek 1130 GMT 10 Oct 91

[Text] Cyprus today signed the European Convention on Transfrontier Television. The agreement was signed by Interior Minister Khristodhoulos Veniamin during the last day of the Council of Europe's Ministerial Conference on mass media, which ended in Nicosia.

The conference was attended by 140 delegates from 30 countries and eight international organizations. The topic of the conference was the role of mass media in the new political and technological conditions currently being formulated in the European region.

FRANCE

Cable TV Development Seen Disappointing

92WT0007B Paris L'USINE NOUVELLE in French 12 Sep 91 pp 30-31

[Article by Jean-Pierre Jolivet: "Cable Television: Big Disappointment to Operators"—first paragraph is L'USINE NOUVELLE introduction]

[Text] The public is standoffish. Equipment orders for new locations are being postponed. The proliferation of noncable stations on the airwaves in Paris and Europe's foot-dragging on adoption of D2 Mac are not making things any easier....

Cable television development in France is beginning to turn into a nightmare. The market penetration ratio (subscribers as a percentage of connection outlets) is virtually stagnant, subscriber disconnections are as high as 20 percent in some locations, and the prospect of new special-interest noncable stations worries cable operators.

In any case, there is a lot of disillusionment. The industry is losing 3.5 to 4 billion French francs [Fr] annually, and France Telecom alone dropped Fr2 billion, while its cable ventures brought in only Fr150

million in all of 1990! And profitability is not just around the corner. "If the situation doesn't change quickly, with a clarification of the role of cable operators on the audiovisual scene, and with some incentives provided, there will be disinvestment," one expert in the sector predicts.

Com-Dev [Communication Development], a subsidiary of Caisse des Depots, has just backed out as operator of two cable-plan locations in northwest Paris and Venissieux. France Telecom, for its part, refuses to build those networks until a new operator is found. "The increasing number of such cases could also have effects on the entire industry," worries Jean-Francois Latour, chief of image telecommunications services at France Telecom.

The latter, which invests Fr2.5 billion per year, has only installed two-thirds of the connection outlets called for in the cable plan. Com-Dev has also suspended work at two other locations (not part of the cable plan), in Limoges and Havre. Its officials explain the decision not in terms of disinvestment but in terms of reorientation toward already commercialized networks.

At Lyonnaise Communications, a subsidiary of Lyonnaise-Dumez, whose financial investments amounted to Fr500 million last year, the low subscriber penetration ratio is disturbing. It also pushes back the timetable for achieving profitability, which was expected to come by 1995. "Without a real surge in subscriptions, it will be harder for us to find investors," says Philippe Henaux, general manager of Paris-Cable, a subsidiary of Lyonnaise Communications. His concerns are almost identical to those of Compagnie Generale de Videocommunication, a subsidiary of Generale des Eaux, where no one is willing to talk about a freeze on investment.

Despite nearly 650,000 subscribers and the 3.5 million connection outlets that will have been installed by the end of 1991, cable television is not a success in France. It has fallen far short of the hopes held out for it by Louis Mexandeau, former minister of PTT [Posts, Telegraph and Telephone], when the famous cable plan was launched in 1983: The timetable called for 3 million subscribers and 5 million connection outlets by the end of 1991. As a result of technological delays (the dispute over coaxial cable versus fiber optics) and marketing blunders (under-estimation of costs of installation, pathetically low hook-up ratios, injudicious choice of locations), France has come nowhere near as far as Germany, which will soon have 10 million subscribers.

But France Telecom has sunk Fr15 billion in the project, so the failure has not been for lack of effort. With encouragement from the authorities, France Telecom 18 months ago took a number of new initiatives. It entered financial partnerships with the principal cable operators,

taking a 10-percent stake in Lyonnaise Communications and Com-Dev and acquiring 10-percent interests in some of Generale des Eaux's local operators. It provides the Visiopass unscramblers that allow cable operators to offer television "a la carte." This involved an additional Fr1 billion investment. There are currently between 7-8,000 Visiopasses in service.

Agreements have been signed providing for France Telecom to provide free hook-ups for apartment buildings, leaving it to the cable operator to negotiate installation and rates with building management, so as to speed up the connection program. Finally, it has begun transmitting programs in D2 Mac (improved images, stereo sound) on about 20 of its networks. The objective: to use better image quality as an additional selling point.

Apparently, it has not been enough to prime the pump, even though the number of subscribers doubled in two years, growing from 300,000 to nearly 650,000. Following a brief quiver of optimism toward the end of last year and early 1991, when the Gulf war stimulated Frenchmen to buy and consume news, the bubble has burst. "Since April, subscriptions have been stagnant," concede officials of France Telecom and the various cable operators. Worse: Given the price/quality ratio of programs, as well as the sometimes onerous procedures customers must go through to get cable programs, subscription cancellations are increasing—both in cable-plan and "new deal" (outside the plan) locations.

In 1991, the penetration ratio—currently 13 percent—will increase by only 1 to 2 percent. Disappointing. So disappointing that cable operators and France Telecom have just sent Jean-Marie Rausch, the posts and telecommunications minister, a joint document (a first) spelling out their position, just a few weeks before publication of the famous "cable decree" to regulate the sector.

Now French cable television is also facing new threats, especially the proliferation of noncable stations in Paris and its suburbs, such as the planned "Euromusique" and "Sept" airwave stations, which could siphon off part of the potential cable clientele.

Uncertain prospects for the improved D2 Mac television standard only add to the dismay among big cable operators. France Telecom is counting on the new system to promote cable and launch the pay television of the future (D2 Mac is well suited to encryption, thus to "pay per view".) European procrastination in imposing that standard as the Old Continent's single broadcast format, the shortage of programs recorded in high-definition, and the belated appearance on the scene of decoders and D2 Mac-compatible televisions could spell defeat for the efforts undertaken to promote cable as a high-end television alternative. And thus push cable profitability further into the distance.

Principal Cable Operators¹

	Subscribers	Housing Units With Outlets
CGV (Generale des Eaux)	262,000	1,450,000
Communication Develop- ment (Caisse des Depots)	173,000	614,000
Lyonnais Communications	128,700	906,000
Reseaux Cables de France (Franco-Belgian interests)	15,000	62,000
Eurocable	14,500	21,500
Bordeaux Plus (Caisse des Depots, Lyonnaise, Generale)	8,800	69,000
Cite Cable	8,500	26,400
Societe Regionale de Com- munication (Credit Agricole)	5,300	9,000
French Power Company Vid- eopole	1,450	2,800
Est Videocommunication	1,130	3,900
Publicly owned companies	29,000	43,500

¹Source: Cable Agency.

Sony Approves D2 Mac HDTV Standard

92WT0007A Paris LE FIGARO (LE FIG-ECO
supplement) in French 27 Sep 91 p 5

[Interview with Sony head Michel Galiana-Mingot by Yann Le Gales; place and date not given: "Sony France President Favors D2 Mac Standard"—first paragraph is LE FIGARO introduction]

[Text] The European Commission is preparing a new Community directive on the D2 Mac standard, which has been the subject of difficult negotiations among the Europeans. Michel Galiana-Mingot, president and general manager of Sony France, explains the position taken by the Japanese giant....

[Le Gales] Is Japan's Sony against the European D2 Mac transmission standard, which the Europeans consider a necessary stage on the road to high definition television (HDTV)?

[Galiana-Mingot] Absolutely not. To the contrary, Sony is in favor of D2 Mac. We applaud its arrival, because we support all technical improvements that make it possible to offer high-end television equipment. Moreover, we are not trying to influence the decisions of the European Commission in any way.

More generally, Sony group has a very clear strategy with respect to transmission standards: We respect the decisions adopted by the regulatory authorities of all countries. Sony will therefore market televisions adapted to all standards (NTSC, Pal, Secam, D2 Mac, Pal-Plus, HD Mac, Muse, etc.). At Sony World, we presented a prototype capable of receiving all standards. In one or two generations, all products will be multistandard.

[Le Gales] Is this strategy of respecting standards costly?

[Galiana-Mingot] The manufacture of multistandard appliances does not entail additional costs that are financially prohibitive. Retail prices will be basically the same.

[Le Gales] Do you think D2 Mac offers image quality clearly superior to that of Secam and Pal?

[Galiana-Mingot] The D2 Mac standard is an intelligent format, but it does involve considerable additional costs, both for consumers and for broadcasters. From a technical standpoint, D2 Mac offers image quality comparable to that of Secam and Pal. In fact, it is essentially an improved version of Secam, since it is a more modern method of transmitting images in 625 lines. Its real advantages are three: digital sound, which has the same quality as compact discs; multiple sound tracks, which make it possible to broadcast the same program in various languages; and a larger 16/9 screen.

Who Will Pay?

On the other hand, its disadvantage is that it is totally noncompatible with the current standards, Secam and Pal. As a result, consumers who have a Secam or Pal television are going to have to pay a lot more to receive programs in D2 Mac: They will have to acquire a satellite dish, a decoder and in some cases an unscrambler (for cable subscribers).

This equipment is costly and complex. The noncompatibility explains why D2 Mac has had development problems.

Broadcasters, for their part, may be obliged to offer satellite programs in both Pal and D2 Mac. Here again, dual broadcasting involves extra costs. Consequently, the only question is who is going to pay for the extra costs entailed by D2 Mac? The consumers? Brussels? The broadcasters?

[Le Gales] Do you think the directive Brussels is preparing might impose D2 Mac on all satellite-broadcast programs?

[Galiana-Mingot] No. Making D2 Mac obligatory would be equivalent to giving a de facto monopoly to the manufacturers of D2 Mac televisions. You must also take into account the high price of D2 Mac televisions in the 16/9 format. Can you imagine Brussels telling automobile makers not to sell cars with engines smaller than two liters?

[Le Gales] What is the least optimistic forecast for D2 Mac?

[Galiana-Mingot] In the worst case, D2 Mac would serve only as a satellite transmission standard for stations that encrypt their broadcasts.

Mobile Telephone Network Test in Strasbourg

92WT0014A Paris LE FIGARO (LE FIG-ECO supplement) in French 2 Oct 91 p 3

[Article by Yann Le Gales: "Pointel: France Telecom Opens Its Pilot Network"—first paragraph is LE FIGARO introduction]

[Text] The public utility is launching the pocket cordless telephone in Strasbourg. A pilot network will be installed in Paris in April 1992....

Strasbourg—In Strasbourg yesterday France Telecom launched the first pilot test of its pocket cordless telephone network. This mobile telephone, called Pointel, weighs only 180 grams and is the size of a pocket calculator. It can be used within a 50-200 meter radius of a radio terminal. It can also be used in the office or at home. Its price: about 2,000 French francs [Fr]. But it will cost Fr3,000 to install one at home (equipment and radio terminal).

To evaluate the market, the utility has chosen to test Pointel on a volunteer group of 1,500 to 2,000 Strasbourg residents. Some 270 public terminals have been installed in downtown Strasbourg and at the airport. The testing period will last six months (from December 1991 to May 1992). The product will not be launched commercially until 1 June 1992. At the same time, Paris will also become a 750-terminal "laboratory."

Bids Solicited

In the capital, the system will be inaugurated commercially starting 1 September 1992 with 1,500 terminals, some of which will be installed near Metro stations.

A symbol of the advent of the personal telephone that can be used to call anywhere, Pointel is the first in a new generation of mobile communications services. Experts predict Pointel, like the European digital car telephone (GSM), has a rosy future ahead of it.

France Telecom projects 500,000 subscribers by 1995 and more than 1.5 million by the year 2005. Initially, the utility will target the professional and business market. But Pointel is expected very rapidly to become a mass-market item. To date France Telecom has ordered only 5,000 Pointel terminals, but in July 1992 it will issue a call for bids on a contract to provide 11,000 terminals for the Paris system.

Cities of more than 50,000 inhabitants will be equipped between 1993 and 1995. In launching Pointel, France Telecom has taken advantage of the British experience and opted for a Europe-wide standard. Pointel can be used in Germany, where Deutsche Telekom is launching a similar experiment in Munich. The French utility will also benefit from its monopoly position. In England, the government authorized four operators. Today only one remains. Even Phonepoint, the British Telephone subsidiary in which France Telecom owns a 10-percent share, has for the time being dropped out of the running.

Disinformation Institute Director Interviewed

92ES0014A Paris LE QUOTIDIEN DE PARIS in French 12 Sep 91 p 13

[Interview with Disinformation Institute President Daniel Trinquet by Francois Labrouillere; place and date not given: "Disinformation: The Institute Organizes the Resistance"]

[Text] Born from the realization, between 1986 and 1988, of the fact that the processing of information remained under the influence of the thought processes from the Left despite the political turnabout, the Disinformation Institute has devoted itself since then to battling against assaults on freedom of information. LE QUOTIDIEN takes stock with its president, Daniel Trinquet. Including the political inclinations of the Institute.

[Labrouillere] As of what date was the Disinformation Research Institute founded? What are its objectives?

[Trinquet] The Institute was founded in April 1987. It is the result of the cohabitation government of 1986. With a certain number of journalists, we indeed realized at that time that despite the change in the majority, nothing was changing in the press, radio and television, where the ideological stronghold of the intellectual terrorism of the Left still reigned. We then decided to set up a structure in order to make the public aware of disinformation and to better inform the public by bringing suppressed information out into the open.

In the beginning, in January 1987, we founded the "Freedom of the Press" club which assembled approximately 150 reporters from Paris, the provinces, but also from abroad. Among the most well known, we can mention names like Jean-Francois Ravel or Annie Kriegel. And as we gained momentum, in order that our efforts would not be restricted solely to journalistic circles, we launched the Disinformation Research Institute, open to all. We were joined at that time by various celebrities such as the dissidents Zinoviev or Boukowsky, the writer Vladimir Volkoff, the prefect Jean Rochet, former manager of the DST [Directorate of Territorial Security], Roger Chaix, former director of the General Information Service, General Jean Delaunay, former Army Chief of Staff, or even the economist Pascal Salin.

[Labrouillere] Specifically, how are your actions organized?

[Trinquet] The Disinformation Research Institute reacts above all, by constantly keeping close watch over current events and the mass media, through our letter "Disinformation Weekly" sold only by subscription. This boils down to operations of defense and sounding the alarm, in order to set the record straight when the truth has been suppressed or distorted. Rapidity of response is an extremely important factor here. Every two months, we also publish an intellectual magazine, THE FREE

JOURNAL, with in-depth articles on important issues. This time, our role aims to be more didactic by explaining the mechanisms of disinformation and how it makes its way in the press and the audiovisual media.

[Labrouillere] Can we attach a political label to you?

[Trinquet] We are on the Right and we do not hide it. Obviously out of a sense of moral obligation, and given the diversity of our supporters, we do not however have precise political affiliations.

For the moment, we have especially fought against the Left, because it is the Left which is in power in France and therefore it is the Left which has the most capabilities for practicing disinformation. But we fight all attempts at disinformation wherever they come from: Neither LE FIGARO nor LE GUOTIDIEN DE PARIS has been spared from our criticisms when we deemed it justified.

[Labrouillere] Hasn't the Disinformation Research Institute sometimes been presented as being close to the National Front?

[Trinquet] Here is a typical example of disinformation. I can assure you that we are not linked in any way with the National Front. No more so than with other political parties. Thus, throughout an event so important as the Persian Gulf War, the Institute took positions diametrically opposed to those of the National Front, which preached collaboration with Iraq.

[Labrouillere] What are the financial resources of your Institute?

[Trinquet] We have particularly scant resources: the Disinformation Research Institute lives exclusively on membership dues and the funds which it obtains from the 1,500 subscriptions to DISINFORMATION WEEKLY. Of course, as you can well imagine, we do not enjoy any official subsidies. I can add that the person who paved the way for the establishment of the Institute, in 1987, was the French-British businessman Jimmy Goldsmith. At that time, he was still the owner of EXPRESS and he was the one who made out the check for 150,000 francs which enabled us to get on our feet. A funny story about that was that his faithful assistant entrusted with executing the payment (today in the entourage of another famous businessman) seemed much less enthusiastic. When she remitted the famous check to us after much beating about the bush, the check had even been made out payable to the Institute of Disinfection! We had all kinds of hassles in getting our banker to cash the check.

[Labrouillere] And you, Trinquet, how did you get here?

[Trinquet] I have a completely traditional background. I am a journalist, a graduate of CFJ (Center for Training of Journalists). I spent most of my career at Radio-France, namely as the person in charge of the publication of the morning newspapers at France-Music. For many years, I was a little like the token right-winger among a

primarily leftist editorial staff, before I, in my turn, was a victim of a witchhunt led by the Socialists in power and had to go before a discipline board. Fortunately, I got myself out of it and I was able to remain at Radio-France. But since the beginning of this year, I took "a one-year sabbatical" in order to devote myself full time to the Disinformation Research Institute.

[Labrouillere] Can you give some good examples of disinformation?

[Trinquet] We can mention, among the most glaring operations recently, the overthrow of Ceausescu in Romania with the staging of the charnel house at Timisoara, or the mass media's exploitation of the desecration of the cemetery at Carpentras. Two patent cases of disinformation which have already been commented upon at large. But disinformation can be much more insidious and pass by almost unnoticed. I will give as an example "Intervilles" [Between the Cities] on TF1 or "La Classe" [the Classroom] on FR3, two very popular television programs which have been associated with "Secours populaire francais" [French Popular Support], and few people know that this is a satellite organization of the Communist Party completely controlled by the Communist Party. Another example: the Tour de France, which is becoming ever-increasingly the Socialist Tour de France. For the past few years, two out of three times, the cities marking the various stages have been Socialist or Communist municipalities. Every evening, Antenne 2 takes advantage of this and obligingly puts on the air the Socialist ministers and prominent players in the regions travelled through, with all of the repercussions which this provokes locally on election campaigns. You have to wait until the finish line in Paris for the opposition to have domain of the city at long last.

[Labrouillere] Isn't your concern about driving out disinformation starting to become a little paranoid?

[Trinquet] Not at all. Disinformation is a real science, with a specific know-how. Left-wingers, who learned well the lessons of Marxism and of mass propaganda, have become experts in the field. But right-wingers are much less effective. They always scoffed at culture and education, two domains which are nevertheless essential. Moreover, for right-wingers, the only thing that counts is the number of channels or the broadcasting time. They are not interested in the contents. The situation is exacerbated by the omnipresence of Agence France-Presse [AFP], a State institution where the quasi-monopolistic situation severely hampers pluralism of information in our country. And by the exorbitant powers of the CGT [General Confederation of Labor], a Communist labor union which, indirectly through the Book Publishing Labor Union and its penetration into NMPP [New Distribution Service of the Parisian Press], it has tight control over printing and circulation of French newspapers.

[Labrouillere] Aren't you being too alarmist?

[Trinquet] The power of the mass media, particularly television, has taken on such breadth in today's society that the political opposition has its hands tied. Its representatives have only one fear: to be banished from the airwaves and not to be able to participate in programs such as "7 sur 7" [7 out of 7] or "L'Heure de Verite" [Hour of Truth]. They often lose all sense of criticism. This is the case of that tenor from the RPR [Rally for the Republic] who, after having bragged that he read LIBERATION, announced that he wanted to become a shareholder in LA TRUFFE [the Truffle]: two newspapers which are not of his political persuasion and which have no reason to humor him.

This prevailing conformity provokes the emergence of a certain number of taboo subjects on which the only authorized opinion is the official line of thinking. You can criticize, but on the condition that you do not step over the yellow line. The Left, for example, learned very adroitly how to use the political weapon of racism, by stirring up confusion between racism and immigration. As soon as someone dares to oppose the views of SOS-Racism, he finds himself branded as an extremist, a racist. He is disqualified and becomes a pariah. From this, perhaps, stems the label of far right which had been ascribed to us. Because the Disinformation Research Institute dared to talk about such a taboo subject as immigration at a time when few people, besides the National Front, were doing so.

[Labrouillere] How can we fight against disinformation?

[Trinquet] Without giving a complete course on disinformation—a book would not cover it all—we can recall the old Chinese proverb: The art of disinforming is to make one's enemies believe that any form of resistance is useless, that it would be better for them to surrender without a fight. This is what is happening today when we hear all of the false prophets say that public opinion is beaten down, that the public no longer has any confidence in the information which is supplied to it.

Rather than deplore this, to the contrary, we must set the record straight, we must say to the public that the battle is not lost in advance, that the public is also a dynamic force in information. Confronted with disinformation, it is up to each one of us to take responsibility for himself. Every time that a case of disinformation can be proven, one must not hesitate to bring this out into the open, to protest and to reestablish the truth. This is the work which we are trying to do at the Disinformation Research Institute. It is in this way that, little by little, attitudes will begin to change.

[Photo caption]

Daniel Trinquet, 37 years old, journalist at Radio-France, is the president and founder of the Disinformation Research Institute. Since 1987, he has been hunting down encroachments upon freedom of information and has been trying to fight against the genuine scourge which disinformation represents in a world where the power of the mass media has become omnipotent.

Company To Build Underwater Optical Fiber Cable

LD1210104191 Paris France-Inter Radio Network in French 1800 GMT 11 Oct 91

[Text] A contract worth 3.8 billion francs has been won by Alcatel. This is the biggest contract ever signed by the company. The contract is for an 18,000-meter underwater optical fiber cable linking Singapore to Marseille and Algiers.

GERMANY

ZDF Television To Manage DS-Kultur Radio Temporarily

LD1210150191 Berlin ADN in German 1356 GMT 11 Oct 91

[Excerpt] Berlin (ADN)—Second German Television (ZDF) will manage the DS-Kultur radio station, which has been taken out of the eastern German radio institution from 1 January 1992, in agreement with ARD until the founding of a joint institution belonging to both companies through a state treaty. The ZDF board of television governors decided on this in Berlin today. Jockel Fuchs, ZDF chairman of the board of governors, and ZDF Director General Dieter Stolte said ZDF was thus complying with a call by the laender prime ministers. [passage omitted]

SEL Reports Status of Projects in Eastern Laender

91M10492X Duesseldorf HANDELSBLATT in German 14 Aug 91 p 15

[Text] Stuttgart—Work is fully underway to improve the totally inadequate communications infrastructure in the new laender. The Deutsche Bundespost Telekom has placed orders with the German telecommunications industry for more than 100 exchanges; 87 of these will be built as part of the turnkey investment program for the construction of complete switching systems. 1991 will see the provision of a total of 500,000 new lines. By 1997 the telecommunications network is to be brought up to the present standard in the old laender.

Standard Elektrik Lorenz AG (SEL Alcatel), Stuttgart, gives a positive interim report of its work. At the half-way stage of 30 June, the Stuttgart firm had completed on schedule 13 of the 27 projects which it was awarded as part of the turnkey project in Thuringia, Saxony, and Saxony Anhalt. Apart from its sister company Kabelmetal Electro of Hanover and its Berlin subsidiary RFT, SEL has around 80 building and other firms from the new laender working for it as subcontractors on the project.

As a prerequisite for the turnkey exchanges coming on stream, four main exchanges using System 12 digital technology were first connected to the system in Berlin.

Erfurt, Leipzig, and Magdeburg "in record time." Meanwhile, SEL is already working flat out on the construction projects for the second half of the year. The photograph shows an SEL radio relay tower of the Kuhberg near Netzschkau in Saxony. [photograph not reproduced]

NETHERLANDS

ISDN Introduction Plans Outlined

91WS0491X Bath ISDN NEWSLETTER in English
17 Jul 91 p 3

[Unattributed article: "Netherlands Will Introduce Narrow Band ISDN"]

[Text] After a spokesman for Dutch operator, PTT [Post, Telegraph, and Telecommunications] Telecom Netherlands claimed that his country was to bypass Narrow-band ISDN [Integrated Services Digital Network] in favour of Broadband ISDN services, PTT Telecom Netherlands' ISDN Programme Manager, has given more details on service implementation.

He said PTT Telecom will commence full ISDN service (Basic and Primary Rate access) at the end of 1991 in Amsterdam, Rotterdam, The Hague and Utrecht. This ISDN service will be based on German standards as is PTT Telecom's ISDN pilot launched 1989 in Rotterdam. PTT Telecom however plans to introduce ISDN in 1993 to standards laid down by ETSI, the European Telecommunications Standards Institute in 1993. It hopes for nationwide coverage by 1996. International ISDN service will be started at the end of the year.

The implementation of ISDN in the Netherlands will be fully in line with the European Memorandum of Understanding. Existing specifications will be updated when the relevant ETSI standards are available. The aim is to have at least "minimum-set" of services available from 1993, according to European standards.

PTT Telecom's Rotterdam ISDN pilot has a direct link to Germany's ISDN network. User-network interfaces meet Deutsche Bundespost Telekom specifications. It was conceived as an environment for ISDN application development and testing under international business conditions. Alongside the Rotterdam pilot, other projects highlight ISDN's potential for networking, business site and desktop level applications. As an interim solution for customers needing digital connections where ISDN is not yet available, PTT Telecom is offering switched end-to-end 64 kbit/s connections, as reported in TIN Volume 3, Issue 5.

NORWAY

Success of EB Nera Satellite Communications Seen

91WT0185A Oslo AFTENPOSTEN in Norwegian
11 Sep 91 p 40

[Article by Per Roste: "High Tech Success From Bergen: Norwegian 'Ears' Listening in Space"—first paragraph is AFTENPOSTEN introduction]

[Text] EB Nera, headquartered in Bergen, has delivered, or has received orders for, satellite communication equipment worth more than one billion kroner.

The German postal and telecommunications company, Deutsche Bundespost Telekom, has recently started employing EB Nera equipment, developed and produced in Norway, at a telecommunications center at Raistings outside Munich.

EB stands out today as the leading supplier of both earth stations and terminals for the INMARSAT system (International Maritime Satellite Organization).

"Norway and EB Nera have, since the start in 1979, been among the leading participants in this system which started as an organization for development of maritime satellites," said Olof Lundberg, managing director of INMARSAT.

"The Norwegian shipping industry, together with Televerket, the authorities, and EB, realized early the need for improved communications at sea, and have been among the forces behind the development of this system, which today includes all types of global communication."

Even though 80 percent of INMARSAT's satellite capacity is used for maritime communication, it is being used to an increasing degree by other user groups. The use of mobile satellite telephones, among other things, got their breakthrough during the Gulf war, when major portions of the ordinary communication system was rendered unusable. EB Nera has so far this year sold about 200 such units at a price of about 300,000 kroner each.

"The development of the technology for satellite communication was started at EB Nera in the early 1970's," said Hakon Otterlei, director of marketing.

"It was the need to establish effective communications between the merchant marine and the shipowners at home that was the impetus," he said.

Televerket, the Norwegian Council for Scientific and Industrial Research, the Maritime Research Institute, and EB Nera were the ones that first and foremost became engaged in this research. The EB company had many years' experience as supplier of radio stations for ships.

The first shipboard terminal for satellite communication was delivered in 1978. The first earth station was put into operation at Eik outside Stavanger in 1982; in principle it is the same type as the one now dedicated at Raistings, but it covers a different geographic area.

It has taken just above 100 million kroner to develop the technology used in the earth stations according to Otterlei.

"But without the close cooperation between the research institutions and the authorities we would never have been where we are today. With the delivery to Eik as a point of reference, EB Nera has in the interval received orders from countries on all five continents," Otterlei said.

PORTUGAL

New Mobile Telephone Contract Detailed

91WT0179A Lisbon PUBLICO in Portuguese
17 Aug 91 p 23

[Article by Ricardo Santos Ferreira: "The Destination of Telecel's Hundred Billion Escudos"—first paragraph is PUBLICO introduction]

[Text] Telecel won the mobile telephone contract with a bid of one hundred three billion escudos, which many think is "perfectly ridiculous." The immediate goal is to create a national, mobile network that will provide the best coverage and support other services. The bottom line for it is to compete with the stationary telecommunications network.

All are unanimous: "Telecel has the best proposal with respect to both material and national coverage." This view meant victory for the consortium headed by the Espirito Santo Group in the bidding for a license to build and operate a mobile telephone network. The decision on the network is directly tied to the investment to be made: "More money equals a better network."

The reaction of the other competitors for the mobile telephone contract came right on the heels of the first rumors that the amount to be invested might have given Telecel the nod in the bidding. The investment estimate was labeled "absolutely ridiculous" and disproportionate. According to officials of a number of consortia contacted by PUBLICO, "the trick used by Telecel was simple. They multiplied the estimate of the number of subscribers by four. Then all they had to do was multiply everything by four, including the investment, and this gave them a hundred three billion escudos." The highest bid after Telecel's was GSM Portugal's nearly 25 billion escudos. The technical side of Telecel's bid is what weighed most in the final, and most expensive, decision. The cost is because the network is capable of covering almost the whole country, including the Azores and Madeira. This kind of coverage is possible by installing eight switchboards (at the intersection of the mobile

network and the stationary network), which is in contrast to just the two proposed by the other consortia, the same number PTT [Portuguese Post and Telecommunications Office] and TLP [Lisbon and Porto Telephone Network] have used up to now in the public mobile telephone network. The average price of each switchboard is around 500 million escudos, which means that the cost for this equipment alone is about four billion escudos.

More Main Telephone Exchanges

Along with the eight switchboards there is another matter that significantly raises the amount of Telecel's bid. This is the number of main telephone exchanges, which Telecel puts at 414, four times more than the average called for by the other bidders. This high number is due to the real difficulty of covering remote areas such as the Azores.

The network's essential equipment will cause an enormous increase in the project's cost, and not just in and of itself. There is also the policy Telecel will follow—purchase rather than lease. The idea is really "to own" the whole network, which is possible given the amount of overall investment. Therefore, the land, the buildings and the towers where the switchboards and main exchanges will be installed will be purchased. This contrasts with other proposals that all for leasing almost everything, including the metal towers (Eurofone wanted to use some of Radio Nova's equipment).

In addition to this, by maximizing the investment, Telecel can not only provide an unbeatable national network for paging, trucking and, possibly, telepoint frequencies, it also will significantly reduce the investment amounts in its proposals by taking advantage of synergies resulting from the mobile telephone network's installations. Furthermore, there seems to be a clear intention to compete with the stationary telecommunications network, especially in areas of difficult access. The fact is, referred to by most of the officials of the consortia contacted by PUBLICO, that "the telephone network in use in Portugal is not efficient and has enormous gaps."

SPAIN

TVE Programs Broadcast to Romania

LD1310214891 Madrid TVE Internacional Television
in Spanish 1930 GMT 12 Oct 91

[Excerpt] This television news program that we are showing you now is being seen simultaneously in Romania. Romanian television chose the eve of Columbus Day to inaugurate the antenna that will bring them TVE's signals.

The satellite antenna that will enable TVE's pictures to reach Romania was inaugurated in Bucharest on Friday. Present at the inauguration of this antenna were Razvan Thedorescu, president of Romanian radio and television, and Spanish Ambassador to Romania Antonio

Nunez Garcia. They stressed that this event represents a very important bond for both countries, which, according to the Spanish ambassador, are distant geographically but are very closely linked by the Latin soul. [passage omitted]

Agreement Signed With Italian Media

LD1210091291 Madrid RNE-1 Radio Network
in Spanish 1900 GMT 11 Oct 91

[Report by Francisco Martinez Campos]

[Excerpt] An agreement signed today by Radiotelevision Espanola Director General Jordi Garcia Candau and Radiotelevisione Italiana [RAI] President Enrico Manca envisages specific agreements on cooperation in sports, culture, and programs as well as a commitment to promote the broadcasting of their respective productions. [passage omitted]

TURKEY

New TV Transmitters, Relay Stations Inaugurated

TA0510071591

[Editorial Report] Ankara Turkiye Radyolari Network in Turkish at 2000 GMT on 27 September reports: "A TV-1 transmitter in Denizli's Esenkaya district and TV-1 and TV-2 transmitters in Kars' Cildir district have been inaugurated."

At 0530 GMT on 29 September, the same radio reports: "The following have become operational: the Ahirdagi FM radio transmitter in Kahramanmaras, the Bigadic TV-2 relay station in Balikesir, the Semdinli-2 TV-2 relay station in Hakkari, and TV-3 relay stations in Guve in Usak, Eskigediz in Kutahya, and Cumaalani in Denizli."

At 2100 GMT on 29 September, the same radio reports: "TV transmitters have been commissioned in Kahramanmaras' Andirin District, Ankara's Navlihan and Haymana districts, as well as Denizli's Navas and Cal districts."

At 2000 GMT on 30 September, the same radio reports: "TV-1 relay stations in Ankara's Muskatlar, Konya's Inkoyu and Antalya's Altinkaya as well as the TV-2 relay station in Sivas' Gemerek quarters have been commissioned."

At 2100 GMT on 2 October, the same radio reports: "A TV-1 transmitter in Nigde's Pazar-2 district, TV-2 and TV-3 transmitters in Giresun's Espiye and Trabzon's

[name indistinct] districts, and TV-2 transmitters in Sahinkaya and Uzungol have been inaugurated."

More TV Relay Stations

TA1210141391

[Editorial Report] Ankara Turkiye Radyolari Network in Turkish at 2100 GMT on 6 October reports: "TV-1 relay stations have been inaugurated in Mustafakoy in Elazig, Kirsekler in Ankara, Kovanli and (?Gune) in Antalya; Uckapili in Nigde; and Narlioren in Adana. A TV-2 relay station has become operational in (Ovacik) in Bitlis. TV-1 and TV-2 stations have also been inaugurated in Belektepe in Bitlis and (Yervi) in Erzurum."

Ankara Turkiye Radyolari Network in Turkish at 2100 GMT on 9 October reports: "TV-1 relay stations in Izmir's Bolsa and Golcuk, in Gumushane's Karadusme, Trabzon's Cayirbagi, and in Kars' Cengelli quarters have been commissioned. TV-1 and TV-2 relay stations in Giresun's Temelli and Trabzon's Caglayan as well as TV-1, TV-2, and TV-3 relay stations in Gumushane have also been commissioned."

UNITED KINGDOM

BBC To Supply Programs for Radio Rossii

LD0910081191 London Press Association in English
0738 GMT 9 Oct 91

[Report by Rob Scully, Press Association, entertainment correspondent]

[Text] The BBC made broadcasting history today with the signing of an agreement to put World Service programmes on to Russian airwaves. Two 30-minute current affairs programmes from the BBC's Russian service will be broadcast each weekend on Radio Russia from early in 1992 after years of jamming and hostility.

"This is the first deal of its kind to be concluded between a western broadcaster and a Russian radio station," said World Service managing director John Tusa. "Coming less than five years since the Soviet Union stopped jamming the BBC, it marks a new high point for our strategy of winning airtime for BBC programmes on domestic radio frequencies."

Programmes will be beamed to Moscow by satellite and rebroadcast simultaneously nationwide. A Russian broadcaster will spend six months in London with the BBC on work experience.

The agreement was signed in Moscow by Mr Tusa and Oleg Poptsov, chairman of the All-Russian State Television [as received] and Radio Company. Radio Russia's network reaches nearly 70 percent of the population in the lands once under the Soviet Union and spans 11 times zones.

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